BY ORDER OF THE COMMANDER
35TH FIGHTER WING

35TH FIGHTER WING INSTRUCTION
91-203

9 SEPTEMBER 2011

Safety

BIRD AIRCRAFT STRIKE HAZARD (BASH) PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction provides a base program to minimize aircraft exposure to potentially hazardous wildlife strikes. It implements AFPD 91-2, Safety Programs, AFI 91-202, US Air Force Mishap Prevention Program and AFPAM 91-212, Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques. This instruction applies to all hosts, associate, and TDY organizations on Misawa AB. 35 FW/SEF is the OPR for this instruction and will complete an annual review by 1 September. The 35 FW/CC is responsible for implementation of this instruction. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at**https://afrims.amc.af.mil/rds_series.cfm**. Additionally, if the publication generates a report(s), alert readers in a statement and cite all applicable Reports Control Numbers in accordance with AFI 33-324. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Form 847s from the field through the appropriate functional's chain of command."

SUMMARY OF CHANGES

Significant changes have been made throughout which necessitate a complete reading of this publication. Major changes include: SEF contact information located in paragraph 1.1 and removes further references; added waiver authority (paragraph 1.1.1); defined BASH phase II requirements and actions (paragraph 1.2.1 and chapter 6); added requirements/procedures for cleaning bird/wildlife remains (paragraphs 3.8.2 and 4.7.1.5); clarified Bird Abatement Team recall (paragraph 4.6); added signature block/approval at end of document. The Attachment

section contains all new maps for bird sanctuaries and migration routes. A bar (|) indicates a revision from the previous edition.

1. BASH PROGRAM INFORMATION PURPOSE & OPR CONTACT: This plan establishes procedures to minimize bird/wildlife strike hazards (BASH) to Misawa AB aircraft. The BASH program relies on a variety of techniques and numerous base organizations to control/reduce these hazards. The 35 FW Flight Safety office (35 FW/SEF) is the office of primary response for all BASH issues and can be reached at DSN 315-226-2710, comm. 0716-77-2710, fax 315-226-2701 or 35FW.SEF@misawa.af.mil.

1.1. WAIVER AUTHORITY: This instruction is derived from multiple sources. A thorough review of these references must be accomplished before seeking a waiver. As long as other directives do not exist, 35 FW/SE is the waiver authority for this instruction.

1.2. **2 SITUATION:** A bird/wildlife aircraft strike hazard continuously exists at Misawa AB and in its vicinity. The hazard severity varies greatly due to seasonal changes and characteristics of resident and migratory bird species and other wildlife. Misawa AB is located directly in the path of most migratory bird routes running north and south along the Japanese islands. Misawa

AB also has two large bodies of brackish/fresh water to its west and northwest which attract migratory waterfowl. The Pacific coastline is only two miles to the east of Misawa AB, furthering the influx of coastal birds. Additionally, small animals such as foxes are prevalent on and around the airfield. The damage potential to an aircraft from these hazards range from minor to the possible loss of an aircraft/aircrew.

1.2.1. BASH PHASE PERIODS: The majority of the year at Misawa is designated as a BASH Phase I period. Bird activity peaks during the Spring (Apr-May) and Fall (Oct-Nov) and are designated as BASH Phase II periods. During BASH Phase II all Misawa AB personnel associated with flight operations should be extra vigilant for bird/wildlife activity and immediately report these observations to Airfield Management operations (AM ops). Additionally, the 35 FW Supervisor of Flight (SOF) and AM Ops are strongly encouraged to increase the Bird Watch Condition (BWC) during expected/observed hazardous conditions. Low levels and night flying are recommended to be avoided or kept to a minimum during BASH Phase II.

1.2.2. PRIMARY MIGRATORY ROUTES: Three primary migratory routes are located near Misawa: the Sakhalin route from Siberia, the Kurils route through the Japanese mainland, and the Sea of Japan route west of Misawa. (Illustration: see Attachment 3g, Bird Migration Routes in Japan)

1.2.3. LOCAL LAKES: Lake Ogawara and Lake Anenuma are located within 1NM of the base to the west and northwest. They attract approximately 100,000 migratory birds each spring and fall.

1.2.4. DRAUGHON RANGE: The base's primary bombing range is located 10NM to the north of Misawa AB. During migratory periods Whopper Swans often rest and linger on Draughon Range for several days prior to departing for Swan Lake Sanctuaries 15 miles to the southeast of the base.

1.2.5. BIRD SANCTUARIES: Misawa AB is flanked on the north and on the south by the Shimokita Peninsula Sanctuary (15NM to the north) and the Shimoda/Swan Lakes Sanctuaries (5.2NM to the southeast). (Illustration: see Attachment 3a, Bird Sanctuaries in Japan)

1.3. **MOST COMMON WILDLIFE HAZARDS:** (See Attachment 3 for a complete wildlife list)

1.3.1. RAPTORS/HAWKS**:** During the summer months raptors and hawks are very active on and over the airfield. Typically they like to soar/hunt over the airfield at several hundred feet altitude. Occasionally they will hover 10-23 feet above the runway. They are not significantly numerous, but due to their size they pose a significant threat to aircraft as they arrive and depart the airfield.

1.3.2. CROWS: Large flocks of crows appear on the airfield all year round. The flocks are most numerous during the July to October time frame. The crows move across the airfield from roosting sites to a local off base garbage dump on a daily cyclic pattern. Both their size and number pose a significant threat to aircrews flying into or out of Misawa AB.

1.3.3. HERONS: Night Herons and Grey Herons are a constant concern around the Misawa airfield. Specifically, a colony of 450+ Night Herons reside year round just north of tower #231, adjacent to Takinosawa Retention Pond. These Herons are nocturnal and transit the airfield at night, making visual avoidance of these large birds virtually impossible. Grey Herons are also year round residents and are the largest member of the Heron family in Japan. They are solitary, only active during daylight hours, and occasionally fly over the airfield as they forage for food. Although the number of Herons around the airfield is relatively small, if struck by an aircraft, the sheer size of these birds could easily cause severe damage.

1.3.4. SWANS and DUCKS: Although mainly a concern during the migratory seasons, Spotted-billed Ducks and Swans do reside around Misawa AB year round. Ducks and swans are most active in the mornings and in the evenings. Small flocks of ducks are occasionally sighted flying over the airfield during non-migratory periods. During migration the flocks become much more prevalent. Additionally, during the migration season, swans frequently transit Draughon Range presenting a severe bird strike hazard to aircraft using the range at low altitude.

1.4. KNOWN ROOSTING/PERCHING AREAS:

1.4.1. HARDENED AIRCRAFT SHELTER AREAS**:** The Hardened Aircraft Shelter (HAS) areas for both the JASDF (Japanese Area Self Defense Force) and the USAF located on the north side of the runway contains a plethora of grounding wires, antennas, and builds. These areas are a constant roosting/perching site for crows and hawks.

1.4.2. AIRFIELD RETENTION PONDS: Retention ponds are located southwest of the approach end of Runway 10 and north of the JASDF HAS area along Falcon Drive on the northeast side of the base. These ponds are constant roosting sites for ducks and other water fowl.

1.4.3. TIMBERED ACERAGE: The timbered acreage directly east of the runway and surrounding the approach clear zone for Runway 28 just outside the perimeter fence cannot be trimmed back due to international relations. These tall and dense trees are commonly used as perching/roosting sites for hawks that hunt over the airfield during the day.

1.5. PRIMARY MEANS OF CONTROL: The primary means of bird/wildlife control is habitat control. Habitat control consists of effective grass management, tree stump removal, landscaping, garbage control and drainage control. When habitat control measures fail to control bird hazards, secondary procedures such as harassment, dispersal and depredation will be employed. Airfield Management and the BASH Abatement Team will use horns, BASH cannons, screamers/bangers or other bird abatement procedures as needed to reduce threats. Lethal measures should also be used to reinforce passive deterrents. All control measures require action from base-wide organizations as described in Chapter 3 of this plan (See AFPAM 91-212 for additional control measures).

2. BIRD HAZARD WORKING GROUP

2.1. PURPOSE: The Bird Hazard Work Group (BHWG) coordinates activities between base and tenant units to implement the 35 FW BASH Program. Key functions of the BHWG are bird/wildlife strike data collection and sharing, identification of hazards, and the coordination

of unit actions. The BHWG also serves as a point of contact and coordination with JASDF units, host nation agencies, and other off-base entities.

2.2. **COMPOSITION:**

2.2.1. CHAIRMAN: 35 FW/CV (Vice Wing Commander)

2.2.2. MEMBERS:

2.2.2.1. 35 FW/SEF	(Wing Flight Safety)
2.2.2.2. 35 OG/CC	(Operations Group CC)
2.2.2.3. 35 MXG/CC	(Maintenance Group CC)
2.2.2.4. 35 AMXS/MXA	(Aircraft Maintenance Squadron Ops Officer)
2.2.2.5. 35 OG/OGV	(Standardization and Evaluation)
2.2.2.6. 35 OSS/OSAL	(ATC Liaison)
2.2.2.7. 35 OSS/OSAM	(Airfield Management)
2.2.2.8. 35 OSS/OSA	(Airfield Operations Flt CC)
2.2.2.9. 35 CES/CEAN	(Environmental Element)
2.2.2.10. 35 CES/CEPM	(Project Management)
2.2.2.11. 35 CES/CEO	(CE Operations Flight)
2.2.2.12. 35 CES/CEAOP	(CE Community Planner)
2.2.2.13. JASDF ATC*	(Japanese Air Traffic Control)
2.2.2.14. JASDF Base Ops*	(Japanese Base Operations)
2.2.2.15. JASDF Safety*	(Japanese Safety Unit)
2.2.2.16. NAF Safety*	(Naval Air Facility Safety)
2.2.2.17. Misawa City Airport Manager*	

* Observed or honorary member of the BHWG

2.3. AUTHORITY: The BHWG acts as an advisory group for unit commanders who implement recommendations from the BHWG through the normal chain of command. The chairman of the BHWG will approve or disapprove group recommendations and meeting minutes. Meeting minutes will be maintained by and distributed by 35 FW/SEF.

2.4. MEETING SCHEDULE: The BHWG meets semi-annually prior to each Phase II migratory period or as requested by 35 FW/SEF or the chairman of the group. Standard meeting times are the second week of March and second week of September.

2.5. MEETING AGENDA: The semi-annual BHWG meeting will cover the following topics as a minimum: Current airfield bird/wildlife strike trends, status of airfield projects aimed at reducing bird/wildlife hazards, current and/or seasonal airfield operations (i.e. airfield mowing), status and utilization of the base BASH Abatement Team, as well as any other issues the chairman or members of the group feel are relevant.

3. UNIT TASKS AND RESPONSIBILITIES

3.1. WING FLIGHT SAFETY (35 FW/SEF):

3.1.1. PUBLICATION MAINTENANCE: 35 FW/SEF is the office of primary responsibility (OPR) for this instruction (35 FW Instruction 91-203). 35 FWI 91-203 will be reviewed annually and updated with appropriate group member inputs.

3.1.2. BASH REPORTING: 35 FW/SEF will collect and disseminate BASH information to the BHWG, compile all reported bird strike data for Misawa AB, submit reports in the Air Force Safety Automated System (AFSAS), and mail recovered bird remains for identification to appropriate agencies IAW AFI 91-204 Safety Investigations and Reports.

3.1.2.1. MAILING ADRESS FOR CLASS-A and B MISHAPS: Smithsonian Institution, Feather Identification Lab, NHBE 610 MRC 116,10th and Constitution Ave. NW, Washington, DC 23560

3.1.2.2. MAILING ADDRESS FOR OTHER MISHAPS/EVENTS: Smithsonian Institution, Feather Identification Lab, NHBE 610 MRC 116, PO Box 37012, Washington, DC 23013-7012

3.1.3. BIRD STRIKE MAP: 35 FW/SEF will maintain a current Misawa AB bird strike map and will distribute copies to all BHWG members and flying squadrons (see Attachment 4).

3.1.4. BASH ABATEMENT TEAM MANAGEMENT: 35 FW/SEF is the OPR for the BASH Abatement Team, and will perform the following responsibilities:

3.1.4.1. TRAINING: Train BASH Abatement Team members in accordance with Chapter 4 of this instruction. Track BASH Abatement Team member currencies.

3.1.4.2. RECALL ROSTER: Provide Airfield Management with a recall roster of BASH Abatement Team members in accordance with Chapter 4.

3.1.4.3. SHOTGUNS & AMMUNITION: Oversee maintenance, accountability, and use of the Safety Office shotguns. Maintain a current ammunition account. Acquire and fund weapons and munitions as required.

3.1.5. BASH PREVENTION CHECKLIST: Maintain and distribute the BASH Prevention Checklist. The checklist and its distribution list are found in Attachment 5 of this instruction.

3.1.6. INDIVIDUAL UNIT BASH SELF INSPECTION CHECKLISTS: Maintain and distribute the Individual Unit BASH Self Inspection Checklists to all agencies tasked in this chapter (Chapter 3) at every Bird Hazard Work Group (BHWG) meeting or semiannually. The checklists are found in Attachment 8 of this instruction.

3.1.7. BIRD HAZARD WORK GROUP MEETING: Coordinate and conduct semiannual BHWG meetings in accordance with Chapter 2.

3.2. WING PUBLIC AFFAIRS (35 FW/PA):

3.2.1. INFORMATION DISSEMINATION: 35 FW/PA will provide information and/or programs designed to inform base personnel, dependents, and the general public on the

hazards and costs of uncontrolled bird activity and the measures being taken to minimize them.

3.2.2. AUDIO VISUAL SERVICES: Provide photographic services as required to document bird strikes and related activities. Provide graphic support to 35 FW/SEF and Airfield Management to publicize bird hazards and actions that can be taken to minimize them.

3.3. OPERATIONS GROUP (35 OG):

3.3.1. BIRD WATCH CONDITION: The 35 OG/CC is the determining authority for Misawa BWC and must establish a Bird Watch Condition (BWC) at all times (see Chapter 6 and Attachment 5). BWC outside 35 FW flying periods serve tenant units and transient aircrew. BWC will be declared for Misawa's local pattern and for Draughon Range.

3.3.1.1. DELEGATION: 35 OG/CC will normally delegate local pattern BWC declaration responsibility to the 35 FW SOF during 35 FW flying periods and to Airfield Management during 35 FW non-flying periods. Airfield Management personnel may suggest changing the BWC to the 35 FW SOF even during 35 FW flying periods. Draughon Range BWC declaration will normally be delegated to the range controllers.

3.3.1.2. DISSEMINATION: Ensure 35 FW pilots have appropriate published procedures relating to BWC and BASH avoidance.

3.3.2. REPORTS: 35 OG/CC will ensure pilots make timely PIREPs (Pilot Reports) of bird activity to 35 FW SOF and Airfield Management while in flight. Pilots will immediately report bird/wildlife strikes (even if discovered on post flight inspection) via AF Form 853 and provide that information to their Squadron FSO for forwarding to 35 FW Flight Safety, (DSN FAX 226-2701, Voice 226-2710)..

3.3.3. BIRD ACTIVITY DATA: Squadron Flight Safety Officers will ensure current bird activity data is available for mission planning and briefings.

3.3.4. BASH ABATEMENT TEAM MANNING: Provide personnel (E-5 or above) as needed to support the BASH Abatement Team. These personnel will complete all required training in accordance with Chapter 4 of this instruction.

3.4. SUPERVISOR OF FLYING (35 OG/OGV):

3.4.1. TRAINING: 35 OG/OGV will ensure all 35 FW SOF personnel are trained in Misawa BASH prevention efforts. The 35 FW SOF shall coordinate with Airfield Management and the BASH Abatement Team on BASH issues and changes in Bird Watch Condition (BWC).

3.4.2. BWC AUTHORITY: The 35 FW SOF will determine the Misawa Airfield BWC during 35 FW flying period. Airfield Management will determine the BWC at all other times unless authority delegated elsewhere by 35 OG/CC IAW para: 3.3.1.1.

3.4.3. DECLARING BWC: The 35 FW SOF will declare/change the BWC for the local flying pattern based on observed activity, PIREPs, seasonal trends, weather, time of day, and criteria found in Chapter 6 and Attachment 5. When changing the BWC, the SOF

will notify Airfield Management and the Tower watch superintendent (to update ATIS). The 35 FW SOF will report to Airfield Management the location and nature of any known bird hazards. Airfield Management will notify the 13 FS, 14 FS operations desks, and 35 FW/SEF.

3.4.4. BASH RESPONSE: When needed, the 35 FW SOF will initiate bird/wildlife hazard response through Airfield Management. Airfield Management has the following bird dispersal techniques at its disposal: 15MM bird bangers, screamers, 12GA Shell Crackers, BASH cannons, vehicles equipped with sirens, and the BASH Abatement Team. 35 FW SOFs are encouraged to be proactive in responding to bird/wildlife hazards.

3.4.5. SOF REPORT: The 35 FW SOF will record significant bird/wildlife activity on the daily SOF report and email or fax a copy of the SOF report to 35 FW/SEF. SOF reports should include any BWC changes, reported or observed bird strikes, significant bird activity, and any activation of the BASH Abatement Team.

3.5. DRAUGHON RANGE (35 OSS/OSCX):

3.5.1. BWC AUTHORITY: Draughon Range controllers will declare BWC for Draughon Range IAW guidance in para: 3.3.1.1, Chapter 6 and Attachment 5 of this instruction. Controllers will make full use of pilot reports assessment of bird activity when assessing BWC. If necessary, have pilots check the pattern before tactical operations to thoroughly assess the BWC.

3.5.2. REPORTS: Report Draughon Range bird activity and changes in BWC to Airfield Management and the 35 FW SOF and document significant bird activity in the Airfield Management BASH database.

3.5.3. DISCOVERED BIRD REMAINS: In the event that bird remains are found and appear to have been struck by an aircraft, place the remains in a plastic bag and coordinate to have the remains delivered to or picked-up by 35 FW/SEF (DSN FAX 226-2701, Voice 226-2710). Or, if bird not struck by aircraft, coordinate to have the remains delivered to or picked-up by35 CES/CEOIE, Pest Management (226-4257/9142).

3.6. AIRFIELD MANAGEMENT (35 OSS/OSA):

3.6.1. BWC DECARATION AUTHORITY: Airfield Management will normally act as the 35 OG/CC designated representative for BWC during non-flying periods IAW para: 3.3.1.1. Reference 35 FW BASH Prevention Checklist (Attachment 5), and Chapter 6 of this instruction for BWC guidelines.

3.6.2. COORDINATION: Act as the 35 FW lead for BASH coordination at the Misawa City Airport.

3.6.3. OPERATION INSTRUCTIONS: Establish operational instructions for all approved lethal and non-lethal techniques used to deter and remove birds/wildlife from the airfield.

3.6.4. WEAPONS & PYROTECHNICS: Assist 35 FW/SEF in, maintaining, and accounting for all bird/wildlife dispersion equipment (e.g. guns, ammo, pyrotechnics, etc). Ensure that this equipment is properly stored in licensed facility at the Airfield Management building.

3.6.5. BASH RESPONSE: Provide initial response to wildlife threats on the airfield for both preventive and reactive methods. Take active measures during all periods of BWC Moderate or Severe to reduce bird/wildlife hazards, including activation of the BASH Abatement Team.

3.6.6. BASH CANNONS: Maintain and operate the BASH system IAW Chapter 5, Attachment 5 of this instruction and inputs from 35 FW/SEF. Fire the BASH cannons one hour before first take-offs, and during runway changes throughout the day as they occur. Coordinate with ground control for authorization/use of bash cannons prior to activation. Coordinate with 35 FW/SEF to move cannons as needed for effective bird deterrence and notify 35 FW/SEF when it is apparent that birds no longer respond to the cannons.

3.6.7. BASH INFORMATION: Post the current BWC and hazards in Airfield Management for use by transient aircrews. Also post Wildlife Strike Report forms (Attachment 6a) and the Bird/Wildlife Sighting Report forms (Attachment 6b) in a visible and easily accessible area.

3.6.8. BASH REPORTS: Act as an information collection and reporting point for bird/wildlife strikes and hazards. Make timely reports of this information to the 35 FW SOF and 35 FW/SEF. Notify the 13 FS & 14 FS Operations Desks, JASDF Base Operations, NAF Misawa, Airfield Manager, and the 35 FW SOF of BWC changes at Draughon Range and on the Airfield. When there is no 35 FW SOF in the tower, notify Tower personnel. These notifications are also listed in the BASH Prevention Checklist (Attachment 5).

3.6.9. BASH INSPECTIONS: Conduct a minimum of three daily BASH inspections. At least one inspection should be conducted during peak raptor activity times of 0930-1700 hours. Document any activity in the Event Log, AF IMT 3616, even if no deterrent action was taken.

3.6.10. DISCOVERED REMAINS: Place any discovered remains that appear to have been struck by an aircraft in a plastic bag and coordinate to have the remains delivered to or picked-up by 35 FW/SEF (DSN FAX 226-2701, Voice 226-2710). Or, if bird not struck by aircraft, coordinate to have the remains delivered to or picked-up by 35 CES/CEOIE, Pest Management (226-4257/9142).

3.6.11. VEHICLE: If manning/mission permits, maintain and provide access to a vehicle and a driver that the BASH Abatement Team can use if needed for bird/wildlife scare and depredation.

3.6.12. BASH ABATEMENT TEAM ACCESS: Maintain a copy of the BASH Abatement Team roster (see Chapter 4 Para. 4.5) and ensure that no one with out-of-date currencies or missing currencies is allowed access to the guns and ammo.

3.7. ATC LIAISON (35 OSS/OSAL):

3.7.1. SERVICES: Coordinate with JASDF ATC for the following services:

3.7.1.1. REPORTS: Report bird activity observed on RADAR or bird/wildlife activity observed visually to aircrews, 35 FW SOF, and Airfield Management.

3.7.1.2. ADVISORIES: Issue BWC and bird advisories to pilots.

3.7.1.3. ATIS: If the BWC is moderate or severe ensure changes to and the current BWC is updated on ATIS.

3.7.2. RUNWAY ACCESS: Coordinate with Ground Control to provide BASH Abatement Team priority access to the runway and ramp areas during BWC Severe. Ensure controllers know their responsibilities and time standards for clearing the use of the BASH Cannons and other bird scare/abatement procedures (see Chapter 5 para: 5.2. and 5.3).

3.7.3. MOUI 3005: Coordinate this instruction with JASDF Standards and the JASDF ATC squadron via the Memorandum of Understanding International 3005 (MOUI FB5235-92-3005) to the maximum extent possible.

3.7.4. ISSUES: Report problems and issues to the BHWG and 35 FW/SEF.

3.8. MAINTENANCE GROUP (35 MXG):

3.8.1. REPORTING: Ensure personnel report hazardous bird activity to the Airfield Management, 35 FW SOF, or 35 FW/SEF. Squadron maintenance personnel can provide valuable bird activity information.

3.8.2. DISCOVERED BIRD STRIKES: Ensure personnel immediately report discovered bird strikes found on aircraft to the 13 FS and 14 FS Operations Desk, 35 FW/SEF, and Quality Assurance. Do not clean surfaces before adequate samples of the remains and photographs of impact areas are taken. Even the smallest fragment of feathers and/or blood smears can be used to assist the USAF bird identification and tracking efforts. Once the aircraft is released for clean up; proceed cleaning IAW T.O. 1-1-691 and para 4.7.1.5 of this instruction as required.

3.8.3. BASH ABATEMENT TEAM AUGMENTATION: Provide personnel (E5 or above) as needed to augment the BASH Abatement Team. These personnel will complete all required training as directed in Chapter 4 of this instruction.

3.9. CIVIL ENGINEER SQUADRON (35 CES):

3.9.1. SERVICES & RESOURCES: Provide resources and advice to the BHWG for environmental modification. Request funds for annual surveys and prepare environmental impact assessments as necessary. Develop procedures and provide services to make the airfield unattractive to birds and wildlife. Correct environmental conditions that increase BASH potential.

3.9.2. INRMP: Incorporate the following practices into the Integrated Natural Resources Management Plan (INRMP).

3.9.2.1. AIRFIELD MOWING: Maintain a uniform grass height between 7 and 14 inches. Cut grass before it goes to seed to discourage seed eating birds from feeding at the airfield. Do not permit grass to exceed 14 inches, as high grass will attract some bird species and rodents, which are a food source for other types of birds. Begin mowing parallel and adjacent to the runway. Work away from the runway, driving the insects and rodents away from the active runway. USAF is responsible for grass cutting west of Taxiway Bravo 3, JASDF cuts east of Taxiway Bravo 3 IAW MOUI FB5235-92-3005.

3.9.2.2. AIRFIELD SEEDING: Coordinate with airfield management to sod or hydro-seed bare areas as determined by the BHWG. Birds frequently use bare areas as resting sites.

3.9.3. LEVELING OF AIRFIELD: Coordinate airfield ponding reduction through the Host Nation and Parallel Runway Project and QKKA 04-1511 In-House Drainage Project.

3.9.4. EDGE EFFECT POLICY: Ensure the airfield meets edge effect policies (grass to trees), eliminating roosting sites through vegetation management, stump removal, and tree pruning.

3.9.5. BIRD PROOFING: Bird proof buildings, hangars, and permanent fixtures (like TACAN and ILS antennas) on or around the airfield, as determined by the BHWG. Use netting, trapping, bird spikes, fishing line, or any other appropriate means. Ensure techniques do not interfere with fire suppression equipment, operational requirements, or cause a larger problem other than the identified bird/wildlife hazard.

3.9.6. BASH ABATEMENT TEAM AUGMENTATION: Provide personnel (E5 or above) as needed to augment the BASH Abatement Team. These personnel will complete all required training as directed in Chapter 4 of this instruction.

3.9.7. SURVEYS: Coordinate for airfield surveys of bird/wildlife problem areas through the BHWG.

3.9.8. AIRFIELD MOWING MAP: Maintain and update the airfield mowing map in the MOUI FB5235-92-3005. This map is the official BASH plan mowing map and is found in Attachment 10 of this instruction.

3.9.9. TREE CUTTING: Coordinate a Tree Cutting Plan with GOJ to reduce/eliminate bird/wildlife hazards in the airfield clear zones.

3.10. SECURITY FORCES SQUADRON (35 SFS): Provide M870 shotgun training, gun maintenance, and advice to BASH Abatement Team through 35 FW/SEF.

3.11. NAVAL AIR FACILITY, MISAWA (NAFM):

3.11.1. BASH SUPPORT: Provide a representative to the BHWG. Support the Misawa AB BASH program and comply with all local BASH procedures except where command or service guidance requires a different reporting process or more restrictive procedures.

3.11.2. BASH REPORTS: Reports provide 35 FW/SEF (DSN FAX 226-2701, Voice 226-2710) information on bird strikes that occur on any assigned, transient, or deployed aircraft. A telephonic brief to 35 FW/SEF will be sufficient for data collection. The AF Form 853 (Attachment 6a, Air Force Wildlife Strike Report) may be used for these reports but will not be forwarded off-base for non-USAF aircraft. Report potential hazards within the tenant unit's area to Airfield Management, (Voice 226-3110) or 35 FW/SEF.

3.11.3. BASH ABATEMENT TEAM AUGMENTATION: Provide personnel (E5 or above) as needed to augment the BASH Abatement Team. These personnel will complete all required training as directed in Chapter 4 of this instruction.

4. BASH ABATEMENT TEAM PROCEDURES

4.1. BASH ABATEMENT TEAM ORGANIZATION: The OPR for the BASH Abatement Team is 35 FW/SEF. The wing FSNCO is the primary team lead unless the 35 FW/SEF designates and trains another qualified individual. The wing FSO is the acting team lead in the absence of the FSNCO or qualified designee. There is no limit as to the number of members that can be on BASH Abatement Team. The BASH Abatement Team lead will adjust the number of members as required to optimize the BASH Abatement Team effectiveness.

4.2. MEMBER ELIGIBILITY REQUIREMENTS: Members must be an E-5 or above and be familiar with shotgun shooting and safety. The BASH Abatement Team lead may make exceptions to these requirements on a case-by-case basis.

4.3. APPOINTMENT: Commanders from base organizations will identify BASH Abatement Team members by appointment letter (see Attachment 7). Appointees will forward their letter to 35 FW/SEF for approval, and addition to the BASH recall roster.

4.4. TRAINING REQUIREMENTS: Individual team members must complete and be current in the following training prior to being allowed access to the shotguns and ammunition for bird/wildlife scare and abatement. All training requirements must be re-accomplished annually, or as otherwise directed.

4.4.1. BASH PROGRAM TRAINING: Conducted by the 35 FW/SEF. Training includes BASH program familiarization and threatened/endangered avian recognition.

4.4.2. M870 SHOTGUN TRAINING: Provided by 35 SFS (Contact CATM at 226-9696

4.4.3. FLIGHTLINE DRIVERS LICENSE: Conducted by Unit Airfield Driving Program Manager. (Note: If a team member does not have his/her flight line driver's license, they must be accompanied by a person who has a flight line driver's license. The person with the license will maintain control of the vehicle and radios at all times.)

4.5. RECALL ROSTER: 35 FW/SEF will maintain a BASH Abatement Team roster that includes name, rank, training complete/due dates, DEROS, duty phone, and organization for each member. 35 FW/SEF will ensure a current copy of the recall roster is forwarded to Airfield Management. The roster is the official document that clears a team member to access the guns, ammo, and the performance of depredation duties. All information on the roster must be current and correct (i.e. updated annual currency requirements).

4.6. BASH ABATEMENT TEAM RECALL: Airfield Management or 35 FW/SEF may recall members of the BASH Abatement Team to fulfill scare/depredation duties as needed to continually condition wildlife to recognize the airfield as an unattractive habitat and to eliminate specific bird/wildlife hazards.

4.6.1. PRE-RECALL: During the 35 FW flying period, the 35 FW SOF will initiate BASH responses IAW (para: 3.4-3.5) by notifying Airfield Management and tower personnel. Airfield Management will notify JASDF Base Operations, 35 FW/SEF, and Security Forces of intended actions. Airfield Management will then provide the initial response to the bird/wildlife hazard and activity, and will utilize all available scare tactics - non-lethal and lethal (i.e. human presence, noise makers, BASH Cannons, shotguns).

4.6.2. RECALL: When initial bird/wildlife dispersion response efforts are ineffective or inadequate, Airfield Management will recommend an increase in the BWC and will coordinate with 35 FW/SEF to notify/recall BASH Abatement Team members until enough personnel are identified to handle the bird/wildlife situation. If 35 FW/SEF is unavailable, Airfield Management will recall BASH Abatement Team members on the recall roster as required. BASH Abatement Team members should report to Airfield Management in Uniform of the Day (UOD) as quickly and safely as possible (less than 45 minutes from activation if possible).

4.6.3. PROACTIVE RECALL: The BASH Abatement Team can be recalled to preemptively scare and depredate birds/wildlife to continually condition wildlife to recognize the airfield as an unattractive habitat. This technique is most effective during morning or evening hours during migration (Phase II) periods of the year. The 35 FW SOF, Airfield Management, or 35 FW/SEF can request this recall and the decision will be made regardless of the flying operations to continually condition wildlife to recognize the airfield as an unattractive habitat and to eliminate specific bird/wildlife hazards.

4.7. BASH ABATEMENT TEAM FIELD PROCEDURES:

4.7.1. SHOTGUN PROCEDURES:

4.7.1.1. APPROVAL TO SHOOT: Misawa ATC (Ground Control) must give approval prior to firing shotguns on the airfield within the Controlled Movement Area (CMA). Do not use the phrase "bird depredation" when requesting approval to shoot; proper phraseology is, "Request Bird Scare for the next X minutes." Use the term "Grassy Area" for infield areas.

4.7.1.2. OPERATE IN PAIRS: BASH team members will operate in pairs, one shooter and one safety observer/radio monitor to the maximum extent possible. Both members will wear orange safety vests and hearing protection.

4.7.1.3. BASE PERIMETER: If near base perimeter fencing, only fire in a direction resulting in ammunition impacting within the base perimeter.

4.7.1.4. PREFERRED METHOD OF FIRE: The preferred method for shooting birds is to fire when birds are on the ground. However if an "air" shot is required, the line of fire must be parallel to the runway and taxiways.

4.7.1.5. BIRD REMAINS: Bird carcasses will be collected, counted, and identified. Remains will be disposed of IAW the base disposal agreement with pest control. Personnel are required to wear rubber gloves, N95 masks when handling bird remains. Double bag (plastic bag) the remains and drop off at the entomology. Put used gloves and mask in bag with remains after remains are sealed inside first plastic bag. Immediately wash your hands thoroughly before touching face.

4.7.1.6. SPENT SHELLS: Retain spent shells and place them back in the ammunition can at Airfield Management for munitions accountability.

4.7.1.7. AMMUNITION & GUN LOG: Fill out the ammunition log, gun log and BASH activity log located near the ammo and guns at Airfield Management.

4.8. IRRE/CERE/ORI OPERATION: The BASH Abatement Team will not respond to exercise inputs or wear chemical protective masks or bulky chemical clothing while actively

dispersing bird/wildlife hazards. Once the bird hazard is eliminated the team members will recover to exercise play.

4.9. BIRD ABATEMENT TEAM LEGAL REVIEW: The Bird Abatement Team Legal Review under SOFA will be updated through 35 FW/JA once every 5 years. Last update accomplished: 05 Jan 2007. Next update due: 05 Jan 2012. (See Attachment 9)

5. BASH CANNON SYSTEM PROCEDURES

5.1. DESCRIPTION: The BASH cannons are a commercial bird deterrent product owned by 35 OG and operated by the SOF, 35FW/SEF, and Airfield Management via either 2 hand held controllers or the computer station at Base Ops. Misawa AB has a three year contract (ending in April 2011) with Reed-Joseph (the manufacturing company of the system). Reed-Joseph has a contract with Christopher Barnett (ph# 226-4406) for maintaining the system. Mr. Barnett is responsible for servicing, inspecting and lubricating the cannons every three months (paid for through Reed-Joseph contract). The system at Misawa consists of 20 units, each containing a propane-powered cannon and loud speaker (bird distress calls). The cannons are operated remotely and are hard wired on the 140.675 MHz frequency. This frequency has been approved and is in the 5 AF Spectrum Management Database. The frequency overlaps with the Misawa AB Services frequency; but, Services only uses this frequency during exercises for PAR sweeps and Mortuary affairs. Historically this overlap has caused no interference issues.

5.2. ACTIVATION PROCEDURES:

5.2.1. CLEARANCE TO ACTIVATE: Authorized users will request bird cannon activation from Misawa Ground Control before use. During periods of limited or no flying, users may request clearance for a specific time or for a specific length of time. During busy flying periods, expect some delays before clearance from Ground Control. Request help from the 35 FW SOF to coordinate timing and reduce this delay.

5.2.2. ACTIVATION: Activate within 1 minute of the clearance or do not activate without receiving a new clearance.

5.3. GROUND CONTROL AUTHORIZATION: Ground Control will authorize system activation under the following conditions:

5.3.1. NO DEPARTURE AIRCRAFT: No departing aircraft are likely to be cleared for takeoff in the next 2 minutes.

5.3.2. NO APPROACH AIRCRAFT: No approaching aircraft are within 2 minutes of landing or low approach.

5.4. POST ACTIVATION: Airfield Management will ensure that the BASH cannon activation is logged in AF IMT 3616 as required.

5.5. EFFECTIVENESS GUIDELINES: BASH cannons are very effective and can be used to scare birds and wildlife away from the airfield. They can greatly reduce the threat of bird strikes and wildlife hazards to aircraft if used correctly.

5.5.1. BASH CANNON HAZARDS TO AIRCRAFT: Since BASH cannons scare birds into the air, there is a small chance that activation of the system may momentarily

increase the bird hazard. This risk is small and easily manageable. The procedures outlined in paragraph 5.3.1 & 5.3.2 of this instruction mitigates this risk.

5.5.2. PROACTIVE USE: Use the BASH cannons at random times, especially near sunrise and sunset, even if flying activity is not immediately planned. Fire several or all cannons at once and observe bird response. If birds immediately land back in the same area, repeat the firing sequence and initiate other scare tactics.

5.5.3. LOCATION: Location of each cannon will be documented by Airfield Management. Movement of cannons will be coordinated through 35 FW/SEF as needed for effective deterrence of birds in the various airfield areas.

5.6. GROUND SAFETY PROCEDURES:

5.6.1. EAR PROTECTION: Both the cannon and speakers create sounds over 130 dB. Personnel should wear ear protection at all times when working within 100 yards of a BASH cannon unless the cannon have been deactivated according to the user manual.

5.6.2. DANGER ZONE: No smoking or open flame is allowed within 50 feet of a BASH cannon unit. No personnel are allowed within 50 feet of a BASH cannon unit unless performing maintenance.

5.6.3. MAINTENANCE: No maintenance will be conducted on cannons that are operational or powered in any way. The BASH cannon unit will be deactivated according to the user manual before any repair or propane servicing work is accomplished. (Contact 35 FW/SEF, for a copy of the user's manual)

5.6.4. PROXIMITY TO COMBUSTIBLES: Do not place or use cannons in or around combustible materials (e.g. tall dry grass).

5.6.5. BARREL: Never place material in the cannon barrel or megaphone.

5.6.6. INDOORS: Never activate cannons inside a building.

5.6.7. SET-UP & STORAGE: Cannons will always be maintained in the vertical position, even during storage.

5.6.8. DAMAGED: Damaged or overturned cannons will be de-activated and inspected. Any damaged components will be replaced or repaired before the unit is returned to use. Damage to the propane components poses a fire hazard. Replace propane components that show damage or excessive wear.

6. BIRD WATCH CONDITIONS (BWC)

6.1. DEFINITIONS: The BWC authority will use the Bird Watch Conditions defined in the Flight Information Handbook Section B Paragraph 4 for all wildlife activity affecting flying operations at Misawa AB. Department of Defense Bird Watch Conditions are limited to the airfield only. Since NEXRAD and other bird reporting and prediction methods are not available at Misawa, the 35 FW cannot declare BWC for the local VFR flying area (within 230 NM of Misawa). (See Attachment 5 for a summary of these definitions.)

6.2. BWC SEVERE: Bird/wildlife activity on or immediately above the active runway or other specific locations representing high potential for strikes. Supervisors and aircrews

must thoroughly evaluate mission need before conducting operations in areas under BWC Severe.

6.2.1. SEVERE GUIDELINES: Bird activity is such that further safe operation of aircraft is unlikely. Examples: One or more birds or animals posing an immediate threat to safe operation; more than 15 large birds and/or more than 30 small birds on or above the runway or target area at Draughon Range. Large flock activity detected by radar, pilots, or ground personnel on more than one key area of the VFR pattern, approach/departure corridors, or Draughon Range pop pattern. Consider BWC Severe immediately after a major bird strike (aircraft emergency due to significant bird strike damage) until the situation can be assessed.

6.3. BWC MODERATE: Bird activity in locations representing increased potential for strikes. Increased vigilance by all agencies, supervisors, and pilots is required.

6.3.1. MODERATE GUIDELINES: Bird activity is such that there is an increased potential for strikes, but further safe operation of aircraft is manageable through increased vigilance by all agencies and supervisors (i.e. pilot, 35 FW SOF, and ATC report of location and number of birds/wildlife). Some examples of increased potential: Five or more large birds circling near the runway or near the target area at Draughon Range, flock activity within 10 NM of the aerodrome, or more than one pilot/tower report of birds in the approach/departure corridors or in the Draughon Range pop pattern. Additionally consider BWC Moderate in the hours of dawn and dusk (especially after a rain storm) during BASH Phase II (April-May and October-November) Based on historical data, BASH Phase II may dictate BWC Moderate without any immediately visible bird activity.

6.4. BWC LOW: Bird activity on and around the airfield is such that there is low potential for strikes.

6.4.1. LOW GUIDELINES: Normal bird or wildlife activity with only occasional and isolated reports.

7. FLIGHT RESTRICTIONS

7.1. APPLICABILITY: The following restrictions apply to 35 FW aircraft. Transient U.S. aircraft and U.S. tenant unit aircraft will comply with these procedures to the maximum extent possible where these procedures do not conflict with that aircraft's technical orders or command guidance. JASDF and Naval Air Facility Misawa units are encouraged to comply with these restrictions to maximum extent possible. (See Attachment 5 for a summary of these restrictions.)

7.2. BWC LOW RESTRICTIONS: No restrictions.

7.3. BWC MODERATE RESTRICTIONS:

7.3.1. TAKEOFF: No formation takeoffs. All takeoffs will be in afterburner if so equipped. Aircraft will expedite climb above 500' AGL. Takeoff only when departure route avoids identified activity.

7.3.2. PATTERN OPERATIONS: Formations will space themselves no closer than route position. Aircraft limited to full stop landing or restricted low approaches at or above 500' AGL.

7.3.3. LANDING: No formation landings. Aircraft limited to full stop landing or restricted low approaches at or above 500' AGL. Land only when arrival route avoids the identified bird activity.

7.3.4. DRAUGHON RANGE: Limit flight and attacks to those that recover above 500' AGL. This will typically only prohibit low angle strafe.

7.4. BWC SEVERE RESTRICTIONS:

7.4.1. TAKEOFF: Prohibited without 35 OG/CC or higher approval.

7.4.2. PATTERN OPERATIONS: Aircraft will divert or hold (fuel permitting) until bird activity subsides.

7.4.3. LANDING: Prohibited without 35 OG/CC or higher approval (unless required for emergency). Non-35 FW aircraft should consider holding until bird activity subsides or land at a divert base.

7.4.4. DRAUGHON RANGE: Low events prohibited. Aircraft will not fly in the pop pattern and all attacks will recover above 2300' AGL.

7.5. LOCAL FLYING AREA RESTRICTIONS: Misawa is not served by any computer bird avoidance models or NEXRAD bird observations. It is currently impossible to make useful BWC declarations for the local flying area (within 230 NM of Misawa.) The following guidelines and restrictions are derived from AFPAM 91-212, *Bird/Wildlife Aircraft Strike Hazard Management Techniques*.

7.5.1. LOW LEVELS: 35 FW pilots will avoid flying low levels one hour before or after sunrise and sunset during the months of April, May, October, and November (BASH Phase II) to the maximum extent possible. This restriction is based on known increases in bird activity around coastal areas and bird sanctuaries during migration seasons.

7.5.2. CONSIDERATIONS: 35 FW pilots will consider all of northern Japan a coastal area. Flying within one hour before or after dawn and dusk should be avoided unless absolutely necessary. The highest levels of bird activity normally occur during these hours as birds leave and return to their roosts. Avoiding flight operations during these periods can significantly reduce the chance of a bird strike.

7.5.3. RAPTOR CONCENTRATION AREAS: 35 FW pilots will avoid areas of known raptor (birds of prey) concentrations based on PIREPs of raptor activity. Pilots will be briefed on these PIREPs and avoid the indicated areas for the remainder of that day. Raptor activity is most concentrated in the summer, during 1000-1700 hours, due to increased thermals. Generally, a maximum altitude of 3,000-4,000' AGL is reached by all raptor species, though soaring can occur at considerably higher altitudes. Likely raptor activities include areas such as ridge lines, rolling hills, large plowed fields where thermals are likely to form, and areas near water.

7.5.4. OBSERVED BIRD ACTIVITY: 35 FW pilots should avoid or remain above 1000' AGL around observed areas of bird activity and report this activity to 35 FW SOF.

7.5.5. NIGHT FLYING: 35 FW pilots will minimize night flying missions, unless necessary, during the waterfowl migration months of April, May, October, and

November (BASH Phase II). Migrating birds are most active from sunset through midnight, with numbers decreasing in the early morning hours.

8. HOST NATION COORDINATION

8.1. JAPAN AIR SELF-DEFENSE FORCE (JASDF) Air Traffic Control and Base Operations:

8.1.1. MEMORANDUM OF UNDERSTANDING INTERNATIONAL: 35 FW will coordinate with JASDF per MOUI FB5235-92-3005. Applicable tenants of that agreement are as follows:

8.1.1.1. INFORMATION EXCHANGE: Immediately exchange bird strike information/remains with 35 FW/SEF. Bird reports should include: any aircraft damage, aircrew recognition (discovered during or post flight), date and time, weather conditions, bird species if known, bird location and altitude, bird activity (soaring, roosting, feeding, etc), possible attractants (garbage, standing water, food, etc), external factors (grass mowing in vicinity for example), and any other pertinent information.

8.1.1.2. BIRD SCARE/ABATEMENT: Conduct bird scare or abatement procedures as determined by the BHWG on airfield areas maintained by JASDF. These include but are not limited to, grass mowing procedures, grass height limitations, landscaping, and drainage control. Use bird harassment/scare procedures when requested by USAF Airfield Management shift supervisor.

8.1.1.3. BHWG MEETINGS: Attend BHWG meetings and provide inputs as necessary.

8.1.1.4. USAF BIRD SCARE/ABATEMENT: When Airfield Management or the BASH Abatement Team requests authorization to use the BASH cannon system or perform bird scare/abatement procedures, clear them to do so if no takeoffs, landings, or low approaches will occur in the next 2 minutes.

8.1.1.5. JASDF BASH TRAINING: JASDF base operations commander is responsible for training JASDF team members in bird scare procedures and safety requirements.

8.2. JAPAN CIVIL AVIATION BUREAU:

8.2.1. COORDINATION: Airfield Management will lead the 35 FW efforts to coordinate with the Misawa Airport. 35 FW requests the following actions from the Misawa Airport.

8.2.2. NOTIFICATIONS: Notify 35 FW/SEF (COMM 226-2710, FAX 226-2701) anytime a civilian aircraft observes and reports hazardous bird activity, or experiences an actual bird strike. Provide any remains/feathers to 35 FW/SEF as well as the following information: aircraft damage, aircrew recognition (discovered during flight or post flight), date/time, weather conditions, bird species if known, bird location and altitude,

bird activity (soaring, roosting, feeding, etc), possible attractants (garbage, standing water, food, etc), external factors (grass mowing in vicinity for example), and any other pertinent information.

8.2.3. BHWG MEETING: Attend BHWG meetings and provide inputs as necessary.

MICHAEL D. ROTHSTEIN, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 91-202, *US Air Force Mishap Prevention Program, 1August 98*

AFI 91-202, *PACAF Supplement 1,9 April 99*

AFPAM 91-212, *Bird/Wildlife Aircraft Strike Hazard Management Techniques, 1 Feb 04*

AFMAN 91-223, *Aviation Safety Investigations* and Reports, 6 Jul 04

AFI 32-7064, *Intergraded Natural Resources Management, 17 Feb 04*

35 FWI 13-201, *Air Traffic Control and Airfield Operations, 9 May 07*

Naval Air Facility Wildlife Survey Installation Natural Resources Management Plan (INRMP), 20 May 2005

35 FW/SEF Annual Bird Strike Summary Report

Adopted Forms

AF Form 847, Recommendation for Change of Publication, 22 Sep 2009

AF Form 853, Air Force Wildlife Strike Report, 15 Oct 2005

AF Form 857, USAF Propellant Sale/Transfer/Return Report, 1 Nov 1997

Acronyms and Abbreviations

ATIS—Automated Terminal Information System

BASH—Bird/Wildlife Aircraft Strike Hazard

BHWG—Bird Hazard Working Group

BWC—Bird Watch Condition

NEXRAD—Next Generation Weather Radar

PIREP—Pilot Report

SEF—Flight Safety

SOF—Supervisor of Flying

BAT—Bird Abatement Team

VFR—Visual Flight Rules

IFR—Instrument Flight Rules

ATC—Air Traffic Control

NAF—Naval Air Facility

FSNCO—Flight Safety Non Commissioned Officer

CoP—Community of Practice

Attachment 2

DISTRIBUTION LIST (ELECTRONIC)

ADDRESSEES	**COPIES**
35 FW/CC	NA
35 FW/CV	NA
35 FW/SE	NA
35 FW/SEF	NA
35 FW/PA	NA
35 OG/CC	NA
35 OG/OGV	NA
35 MSG/CC	NA
35 MXG/CC	NA
35 AMXS/CC	NA
13 FS/CC	NA
14 FS/CC	NA
35 OSS/CC	NA
35 OSS/OSAM	NA
35 OSS/OSO	NA
35 OSS/OSA	NA
35 OSS/OSAL	NA
35 OSS/OSW	NA
35 OSS/OSCT	NA
35 SFS/CC	NA
35 CES/CC	NA
35 CES/CEAN	NA
35 CES/CEOR	NA
35 CS/SCSV	NA
Naval Information Operation Command	NA
Naval Security Group Activity	NA
3rd Air Wing (JASDF) Safety	NA
JASDF/ATC	NA
JASDF Base Operations	NA
HQ PACAF/A3AA	NA
HQ PACAF/SE	NA
HQ PACAF/DOCS	NA
5 AF/SE	NA
HQ AFSA/SEFW (BASH Team)	NA
Misawa City Airport Manager	NA

TOTAL REQUIRED: 44

Attachment 3

MISAWA BIRD HAZARD GUIDE

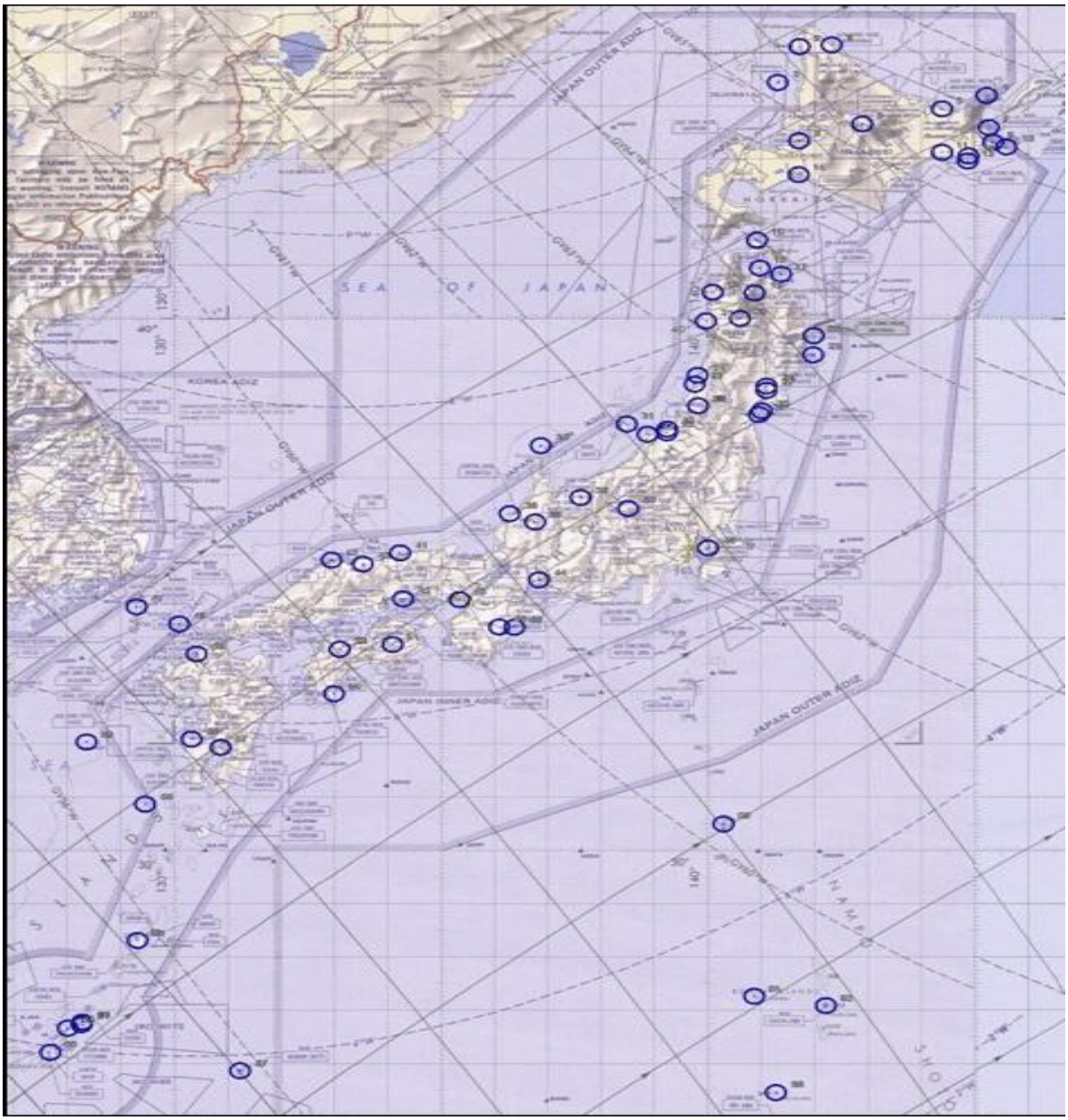
LOCAL BIRD SPECIES LIST: Bird species identified during first stage of Naval Air Facility funded wildlife study at Misawa, November 97. Crows, hawks, and migratory water fowl comprise the most significant threat the airfield operations.

Common Name (Proper Name)	Location
Jungle Crow *(Corvus macrorhynchos)* Carion Crow *(Corvus corone)* Black Kite *(Milvus migrans)* Rufous Turtle Dove *(Streptopelia orientalis)* Rock Dove (pigeon) *(Columba livia)*	Airfield proper
Gold crest *(Regulus regulus)* Oriental Greenfinch *(Carduelis sinica)* Siberian Meadow Bunting *(Emberiza cioides)* Rustic Bunting *(Emberiza rustica)* Black Faced Bunting *(Emberiza spodocephala)* Great Spotted Woodpecker *(Dendrocopos major)* Tree Sparrow *(Passer montanus)* Great Tit *(Parus major)* Coal Tit *(Parus ater)*	Wooded, unimproved or poorly-kept areas in the vicinity of the airfield
Black Headed Gull *(Larus ridibundus)* Pochard *(Anthya ferina)* Eurasian Wigeon *(Anas penelope)* Mallard *(Anas platyrhynchos)* Pintail *(Anas acuta)* White Wagtail *(Motacilla alba)* Gray Heron *(Ardea cinerea)* Whooper Swan *(Cygnus cygnus)* Whistling Swan *(Cygnus columbianus)* European Coot *(Fulica atia)* Great Egret *(Egretta alba)* Common Kingfisher *(Alcedo althis)* Cormorant *(Phalacrocorax sp.)* Smew *(Mergus albellus)*	Lakefront or coastal waters west and north of airfield

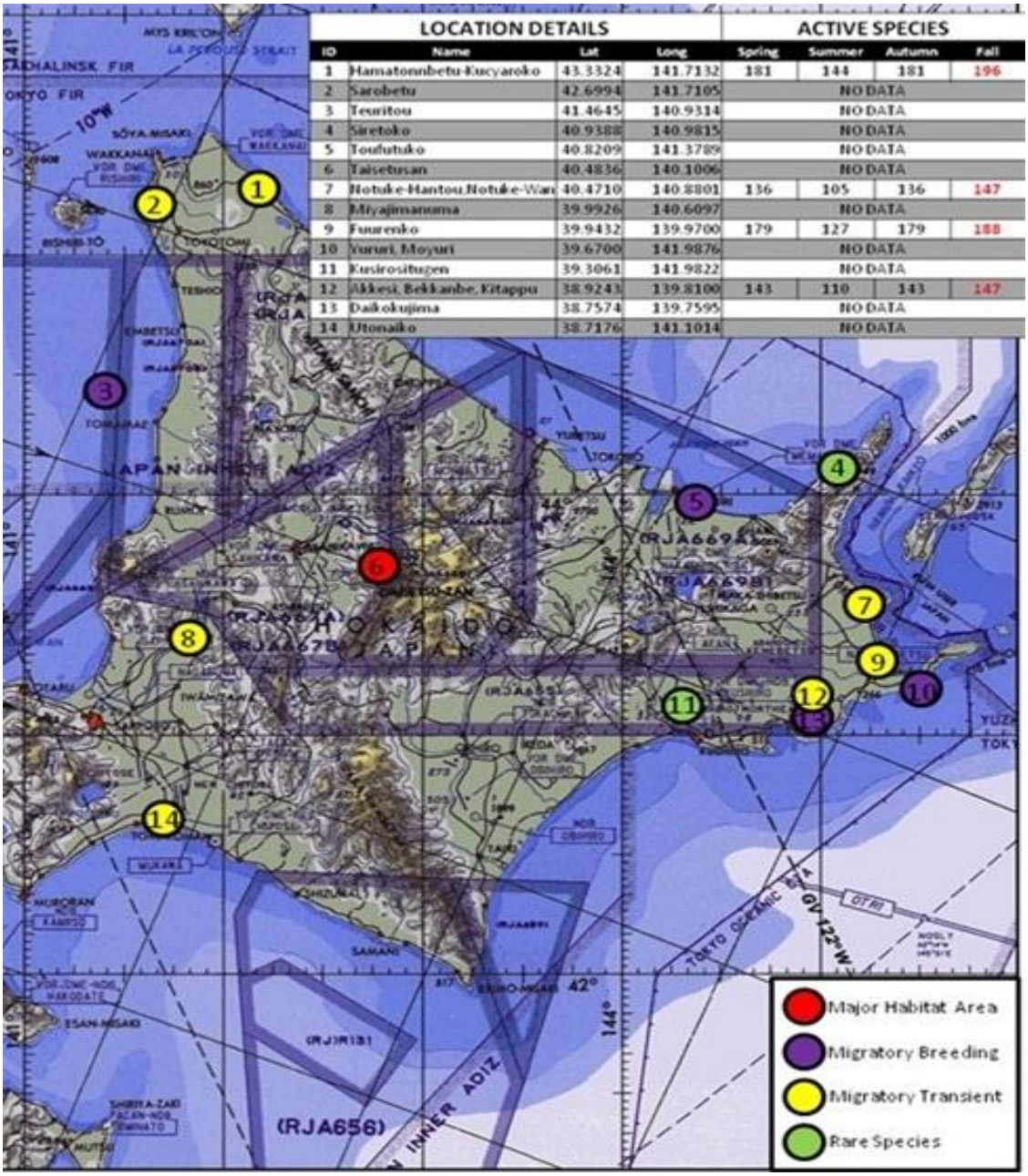
OTHER WILDLIFE (RABBITS/FOXES): Rabbits are not a significant hazard to aircraft, but they often attract raptors. Proper grass management is used to reduce the numbers of these animals on the airfield. Foxes are also present at Misawa. Foxes are normally about the size of a small dog and prey on mice and rabbits. This has the overall effect of reducing food sources for raptors such as the local Black Kite. While foxes can present a hazard to aircraft, they are considered beneficial in small numbers. When deemed necessary, these animals can be trapped and relocated to a safe environment off the airfield.

BIRD SANCTUARIES IN JAPAN

BIRD SANCTUARIES IN JAPAN: The following maps provide locations of significant bird sanctuaries in Japan and the number of active species based on season. Aircrews should use caution when operating in these areas. All information is derived from the 2010 Sanctuary Survey. More detailed information on species and activity can be obtained by request through SEF or by reviewing the files on the SEF SharePoint. PFPS drawing and route files are also available through SEF.

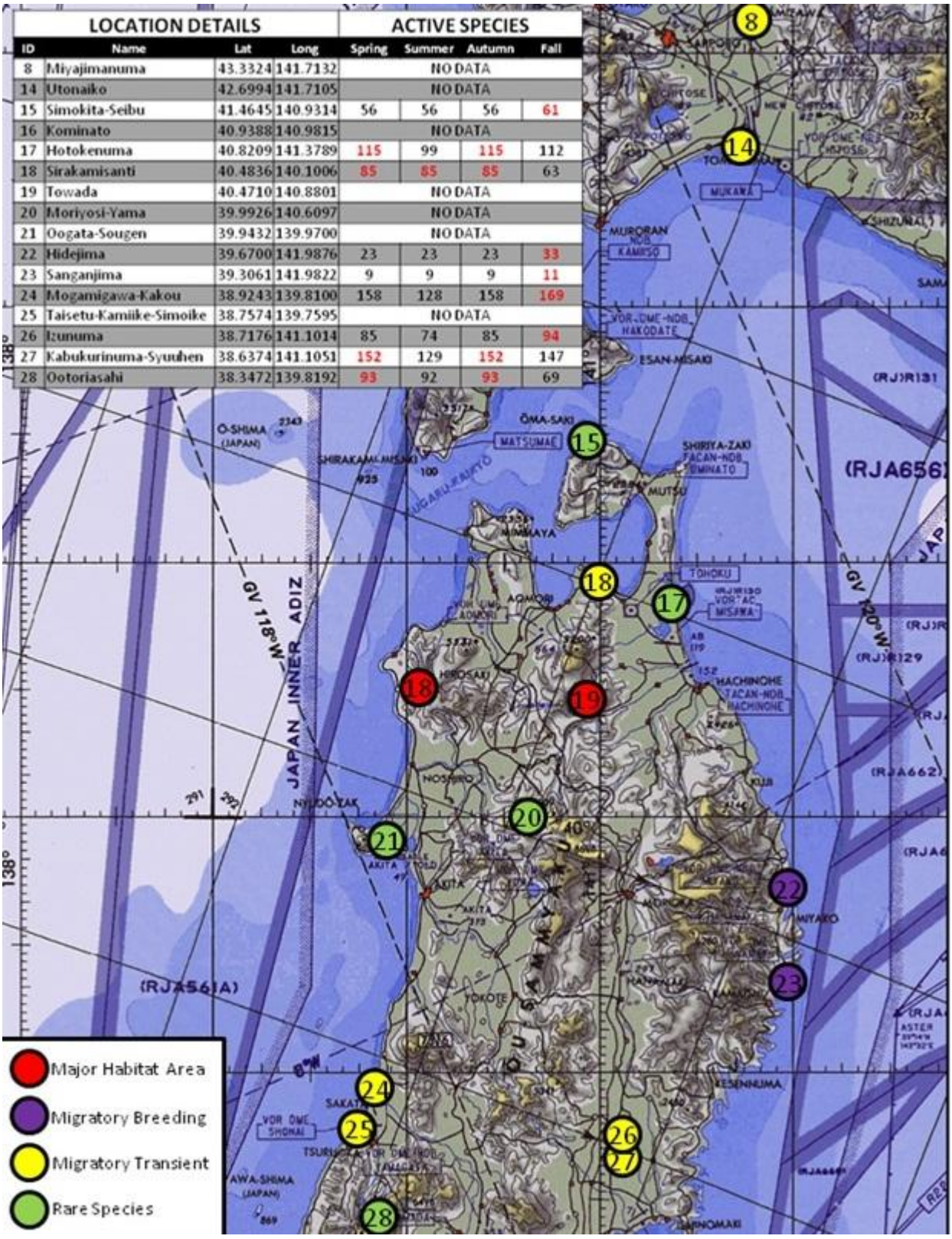


Hokkaido Bird HabitatAreas

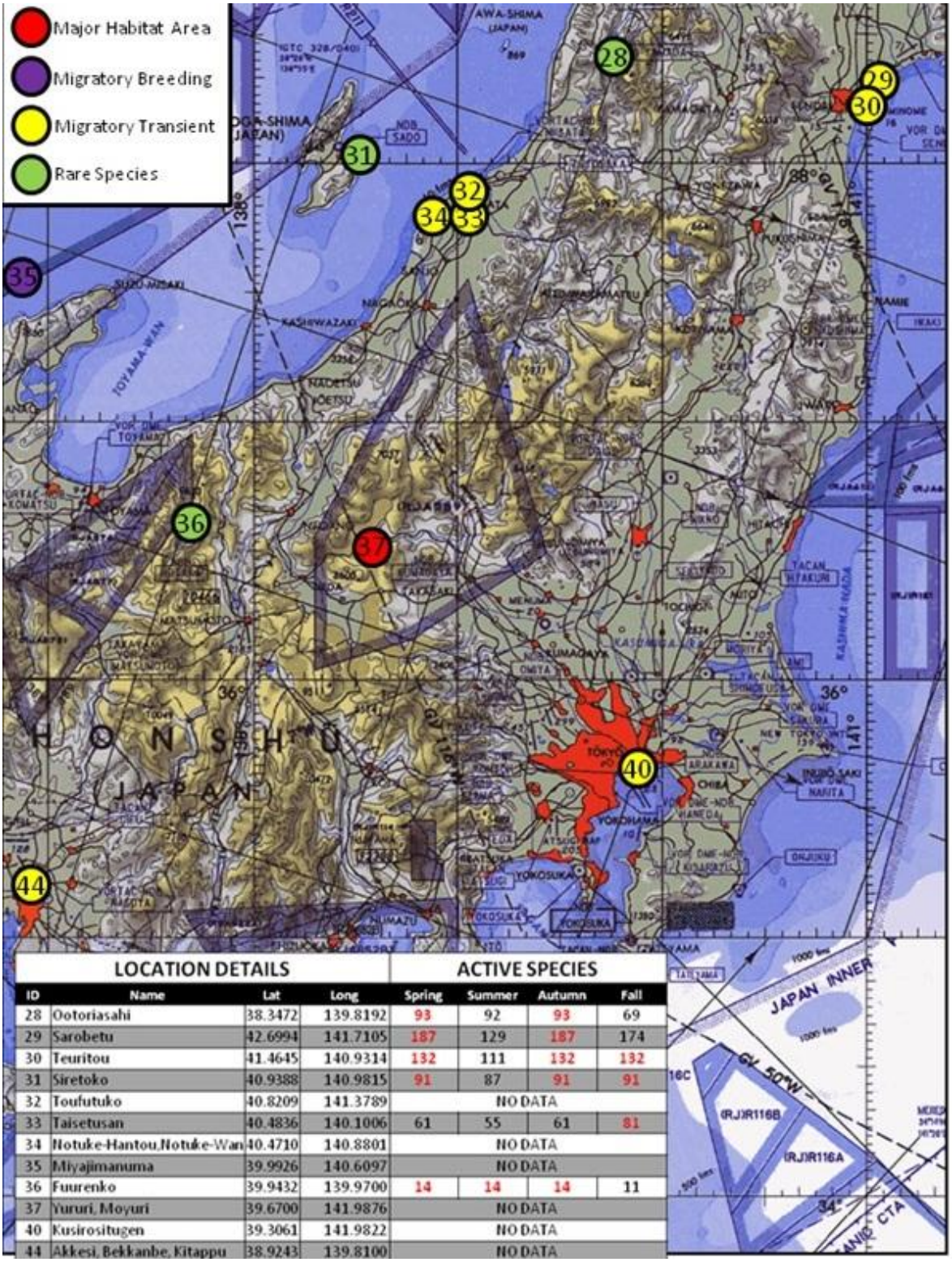


LOCATION DETAILS				ACTIVE SPECIES			
ID	Name	Lat	Long	Spring	Summer	Autumn	Fall
1	Hamatonnbetu-Kucyareko	43.3324	141.7132	181	144	181	196
2	Sarobetu	42.6994	141.7105	NO DATA			
3	Teuritou	41.4645	140.9314	NO DATA			
4	Siretoko	40.9388	140.9815	NO DATA			
5	Toututuko	40.8209	141.3789	NO DATA			
6	Taisetusan	40.4836	140.1006	NO DATA			
7	Notuke-Hantou,Notuke-Wan	40.4710	140.8801	136	105	136	147
8	Miyajimanuma	39.9926	140.6097	NO DATA			
9	Fuurenko	39.9432	139.9700	179	127	179	188
10	Yururi,Moyuri	39.6700	141.9876	NO DATA			
11	Kusirositugen	39.3061	141.9822	NO DATA			
12	Akkesi, Bekkanbe, Kitappu	38.9243	139.8100	143	110	143	147
13	Daikokujima	38.7574	139.7595	NO DATA			
14	Utonaiko	38.7176	141.1014	NO DATA			

Northern Honshu/Southern Hokkaido Bird Habitat Areas

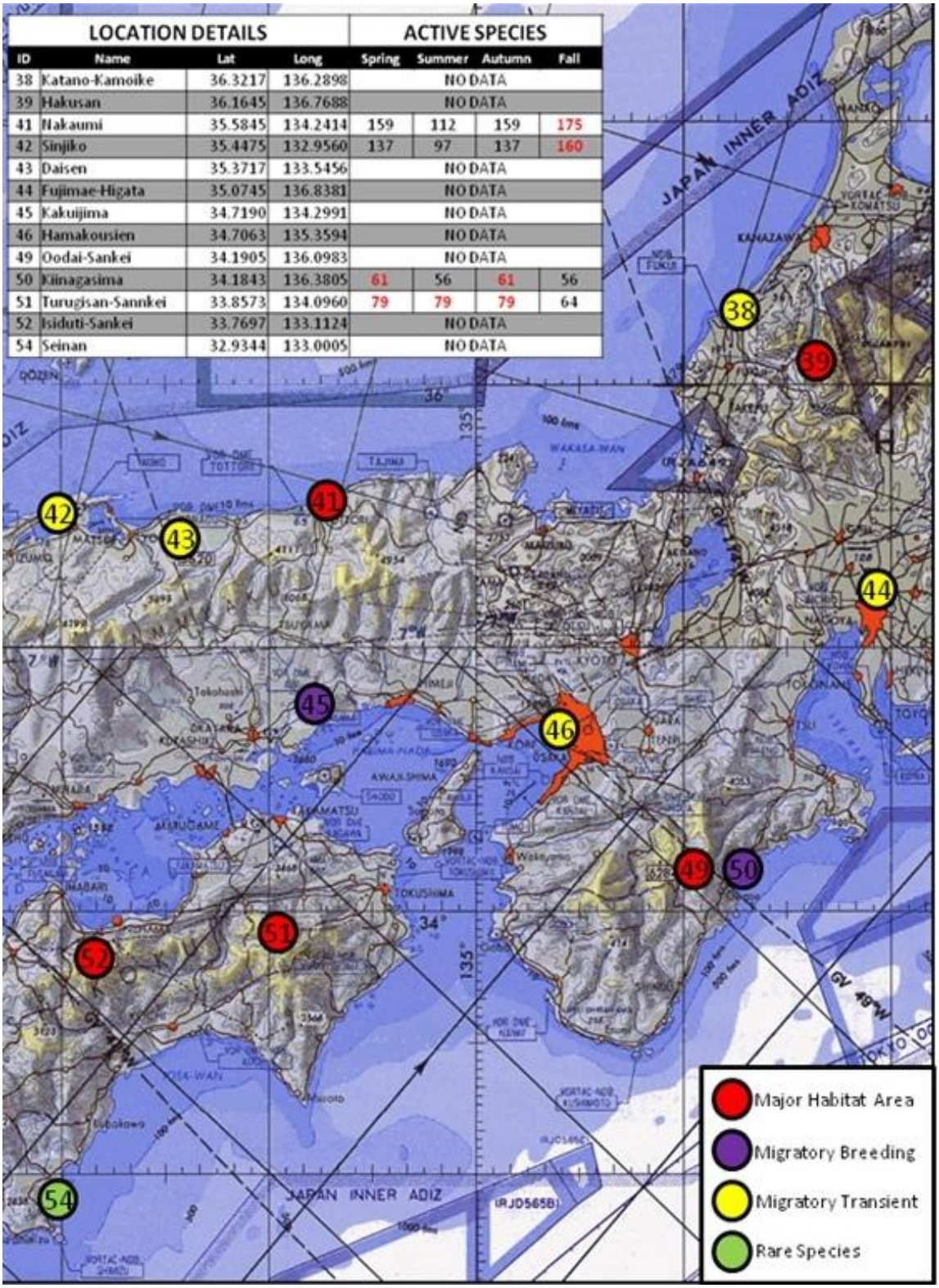


Central Honshu Bird Habitat Areas



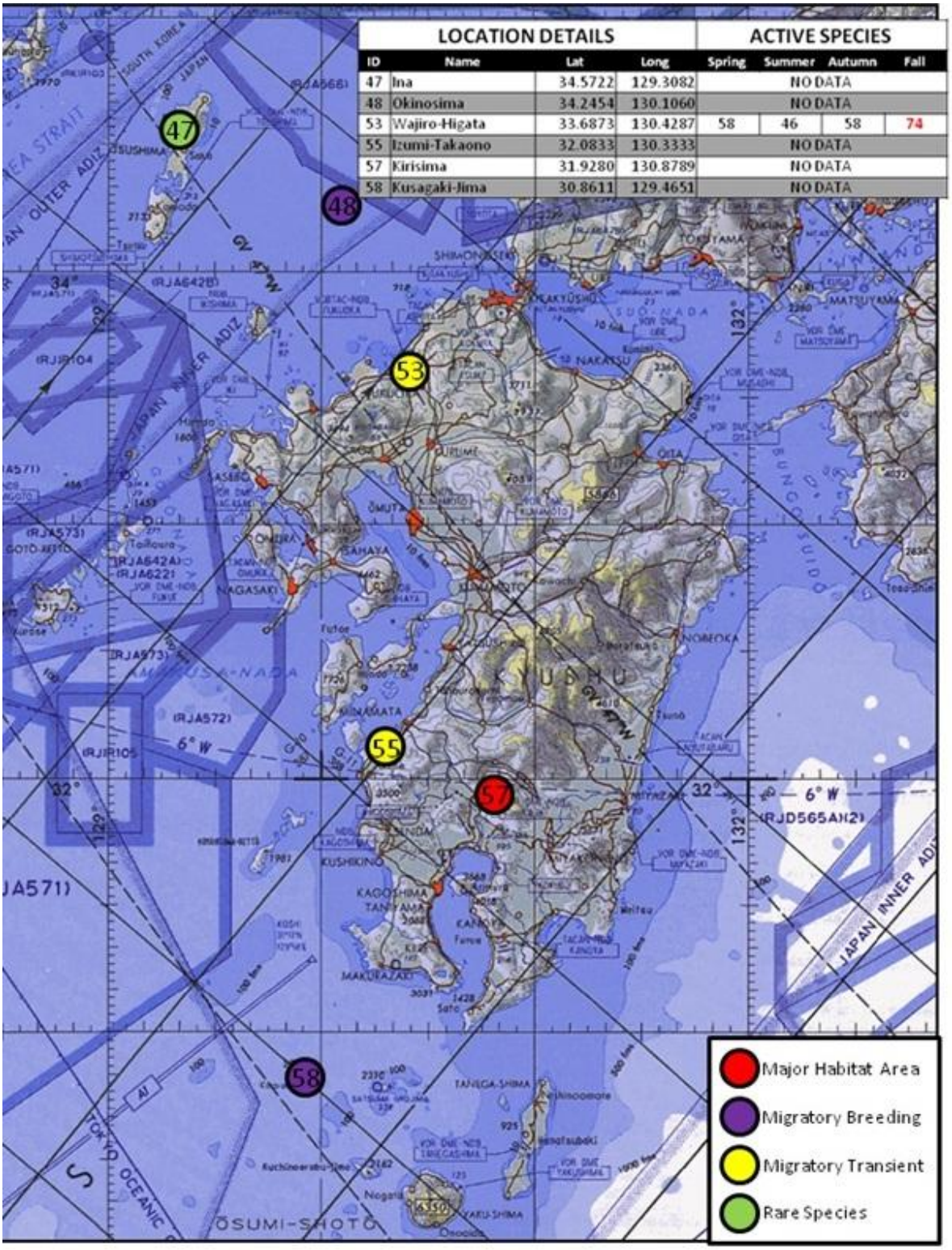
LOCATION DETAILS				ACTIVE SPECIES			
ID	Name	Lat	Long	Spring	Summer	Autumn	Fall
28	Ootoriasahi	38.3472	139.8192	93	92	93	69
29	Sarobetu	42.6994	141.7105	187	129	187	174
30	Teuritou	41.4645	140.9314	132	111	132	132
31	Siretoko	40.9388	140.9815	91	87	91	91
32	Toufutuko	40.8209	141.3789	NO DATA			
33	Taisetusan	40.4836	140.1006	61	55	61	81
34	Notuke-Hantou,Notuke-Wan	40.4710	140.8801	NO DATA			
35	Miyajimanuma	39.9926	140.6097	NO DATA			
36	Fuurenko	39.9432	139.9700	14	14	14	11
37	Yururi, Moyuri	39.6700	141.9876	NO DATA			
40	Kusirositugen	39.3061	141.9822	NO DATA			
44	Akkesi, Bekkanbe, Kitappu	38.9243	139.8100	NO DATA			

Shikoku/Eastern Honshu Bird Habitat Areas



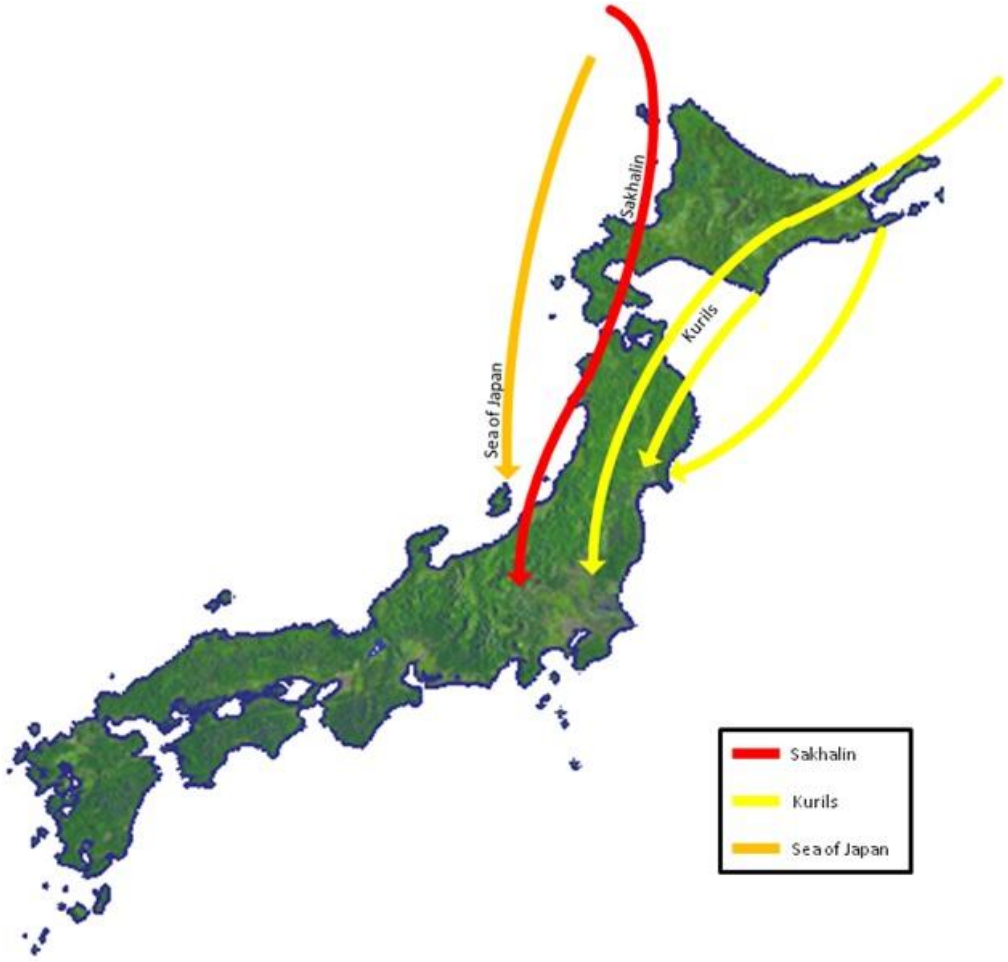
LOCATION DETAILS				ACTIVE SPECIES			
ID	Name	Lat	Long	Spring	Summer	Autumn	Fall
38	Katano-Kamoike	36.3217	136.2898	NO DATA			
39	Hakusan	36.1645	136.7688	NO DATA			
41	Nakaumi	35.5845	134.2414	159	112	159	175
42	Sinjiko	35.4475	132.9560	137	97	137	160
43	Daisen	35.3717	133.5456	NO DATA			
44	Fujimae-Higata	35.0745	136.8381	NO DATA			
45	Kakuijima	34.7190	134.2991	NO DATA			
46	Hamakousien	34.7063	135.3594	NO DATA			
49	Oodai-Sankei	34.1905	136.0983	NO DATA			
50	Kinagasima	34.1843	136.3805	61	56	61	56
51	Turugisan-Sannkei	33.8573	134.0960	79	79	79	64
52	Isiduti-Sankei	33.7697	133.1124	NO DATA			
54	Seinan	32.9344	133.0005	NO DATA			

Kyushu Bird Habitat Areas



Bird Migration routes in Japan

BIRD MIGRATION ROUTES IN JAPAN: This map depicts the migratory bird routes in Japan. Peak migration periods are late April through May and October through November. This information is also maintained on the 35 FW/SEF electronic files.



ATTACHMENT 4

BIRD STRIKE AREA MAP

All bird strikes, near misses, and areas of observed significant bird activity reported in the local flying area are studied and disseminated to the flying units via this map. 35 FW/SEF maintains and updates this map with the most current being present on the Misawa Flight Safety SharePoint.

SAMPLE BIRD STRIKE MAP

1 - xx Jan xxxx, 1645hrs, F-16 struck a sparrow on short final to rwy28, no damage, BWC Low
2 - xx Feb xxxx, 1205hrs, F-4 struck a duck on takeoff rwy 28, no damage, BWC Moderate
3 - xx Mar xxxx, 1500hrs, JAL struck a flock of geese on final, radome damaged, BWC Severe
4 - xx Apr xxxx, 1700hrs, F-16 struck a unknown bird on ILS str-in, no damage, BWC Low

Attachment 5

BASH PREVENTION CHECKLIST

The following pages contain the 35 FW BASH PREVENTION CHECKLIST. This checklist will be distributed to the following:

35 OG/CC

35 FW SOF

35 OSS AIRFIELD MANAGEMENT

DRAUGHON RANGE

13 FS OPERATIONS DESK

14 FS OPERATIONS DESK

NAVAL AIR FACILITY SAFETY

JASDF BASE OPERATIONS

BASH PREVENTION CHECKLIST (1 of 4):

DEFINITIONS:

BASH	Bird/Wildlife Aircraft Strike Hazard
BASH Team	Responsible for bird/animal deterrence and depredation through lethal and non-lethal means
BWC	Bird Watch Condition - Based on bird activity - Dictates hazard reduction procedures - Declared for a specific area.

BWC AUTHORITY: The 35 OG/CC has the BWC declaration authority.
35 OG/CC delegates this BWC authority to the 35 FW SOF, Airfield Management, or other organizations as needed.

NOTIFICATIONS FOR BWC CHANGES (INCLUDING DOWNGRADING BWC):

Agency:	*Will Notify:*
35 FW SOF:	Tower (Update ATIS) 13th and 14th Squadron Ops Desks Airfield Management NAF Misawa Wing Flight Safety
Airfield Management:	13th and 14th Squadron Ops Desks JASDF Base Operations Airfield Manager NAF Misawa Post BWC for transient aircrews Wing Flight Safety *IF NO SOF IN TOWER*- Tower - Update ATIS
DRAUGHON RANGE:	35 FW SOF Airfield Management

BWC GUIDELINES: Severe, Moderate, and Normal labels will be used. These guidelines are flexible. The BWC authority should use his/her best judgment in declaring the BWC.

SEVERE:	DOD FIH B-4. Bird activity on or immediately above the active runway or other specific location representing high potential for strikes. Supervisors and aircrews must thoroughly evaluate mission need before conducting operations in areas under condition SEVERE.	
	SEVERE CRITERIA:	More than 15 large birds and/or more than 30 small birds on or above the runway or target area at Draughon Range.
		Flock activity on approach or departure corridors or in Draughon pop pattern.
		Large flock activity at key VFR pattern points, radar indications of large flock activity, pilot reports of heavy bird activity.
		Consider BWC SEVERE immediately after a report of a major bird strike (A/C emergency due to the strike or significant damage) until the situation can be assessed
MODERATE:	DOD FIH B-4. Bird activity in locations representing increased potential for strikes. BWC moderate requires increased vigilance by all agencies and supervisors and caution by aircrews.	
	MODERATE CRITERIA:	Increased bird or wildlife activity meaning aircraft can operate with certain restrictions. Pilot or tower reports of several birds on approach or departure or in Draughon pop pattern.
		Five or more large birds circling near the runway or near the target area at Draughon Range.
		Flock activity within 10 NM.
		Consider MODERATE for dawn and dusk (especially after rain) during April-May and October-November.
LOW:	DOD FIH B-4. Bird activity on and around the airfield representing low potential for strikes.	
	LOW CRITERIA:	Normal level of risk due to bird or animal activity meaning aircraft can operate without BASH related restrictions.
		Only occasional and isolated bird activity and no pilot reports of significant bird activity.

BASH PREVENTION CHECKLIST (2 of 4):

MISAWA AIRFIELD RESTRICTIONS

	Bird Watch Condition		
	Low	**Moderate**	**Severe**
Takeoff	Normal Ops	No formation takeoffs. All takeoffs will be in afterburner if so equipped. Aircraft will expedite climb above 500' AGL. Takeoff only when departure route avoids the identified activity	Prohibited without 35 OG/CC or higher approval
Patterns	Normal Ops	Formations will space themselves no closer than route position. Aircraft limited to full stop landing or restricted low approaches at or above500' AGL.	Aircraft will divert or hold (fuel permitting) until bird activity subsides
Landing	Normal Ops	No formation landings. Aircraft limited to full stop landing or restricted low approaches at or above 500' AGL. Land only when arrival route avoids the identified bird activity..	Prohibited without 35 OG/CC or higher approval (unless required for emergency)

DRAUGHON RESTRICTIONS

BIRD WATCH CONDITION		
Low	**Moderate**	**Severe**
Normal Operations	Recover from all events above 500' AGL	No Low events prohibited(No Pop Pattern and all recoveries above 2300' AGL)

Note: ***Consider using same BWC for both DRAUGHON Range as well at Misawa airfield due to their relative proximity of each other.***
Pilot assessments of Misawa airspace can be used by controllers to change Draughon BWC

LOCAL FLYING AREA RESTRICTIONS

A. Pilots should not fly low-levels within one hour after sunrise or one hour before sunset during the months of April, May, October, and November (BASH Phase II)

B. Pilots will avoid areas with known raptor concentrations based on PIREPs of raptor activity. (Raptor activity [typical max altitude 3000' to 4000' AGL] greatest: summer, 1000-1700 hrs, Located near thermal areas; ridges, coast, rolling hills, ex.)

C. 35 FW pilots will remain above 1000' AGL in areas where they observe increased bird activity. Report this activity to 35 FW SOF or Airfield Management as soon as practical.

D. 35 FW pilots should avoid flying night missions during the waterfowl migration months of April, May, October, and November (BASH Phase II).

BASH PREVENTION CHECKLIST (3 of 4):

BASH CANNON PROCEDURES

BASH cannons will be operated by Airfield Management, 35 FW SOF or 35 FW/SEF in accordance with the following directions.

1. Request "Cannon Activation" from Misawa Ground Control before use.
2. Activate ***within one minute*** or do not activate without a new clearance.
3. Ground will clear cannon activation when the following is true:
   - No A/C cleared for takeoff or expected in the next 2 minutes.
   - No landing A/C within the next 2 minutes.
4. Request 35 FW SOF help to coordinate timing during busy air traffic periods.
5. Airfield Management will ensure cannon activation is documented on the Bird / Wildlife Deterrent Summary log.

BASH CANNON RECOMMENDATIONS:

Use the BASH Cannons at random times especially near sunrise and sunset, even if flying activity is not immediately planned. Fire several or all cannons at once and observe bird response. If birds immediately land back in the same area, repeat the firing sequence and initiate other scare/depredation tactics.

BIRD DISPERSAL PROCEDURES

Non-Lethal:	Use during normal and increased bird or wildlife activity. This is the first course of action to remove wildlife.	
	TOOLS:	OPS vehicle horn, lights, siren and distress tape.
		Pyrotechnics; screamers, banger and cracker shells.
		BASH Cannon activation
		Radar indications of large flock activity
Lethal:	Use during ***severe*** bird/wildlife activity or as required if initial methods are inadequate or non-effective.	
	TOOLS:	Shotguns
		BAT team will respond within 45 minutes.

PILOT REPORTS OF BIRD ACTIVITY

1. Report actual or suspected Bird/wildlife Strikes via AF Form 853. Submit form to squadron flight safety or FAX / Email the form to 35 *FW/SEF* (DSN fax 226-2701). Call 35 *FW/SEF* for help with this form. (DSN 226-2710)

2. Report significant or hazardous bird activity immediately to the 35 FW SOF and provide:
   - Call sign
   - Location
   - Altitude
   - Time of sighting
   - Type of bird (if known)
   - Approximate number of birds
   - Activity/Behavior of birds

GROUND PERSONNEL REPORTS OF BIRD ACTIVITY

All personnel, especially airfield management and maintenance personnel must report significant bird or wildlife activity to 35 FW/SEF.

DISCOVERED BIRD or ANIMAL REMAINS

1. If bird or animal remains are found and appear to have been struck by an aircraft: Call Base Ops 226-3110 or Flight Safety 226-2710

1. If airfield management or Flight Safety cannot immediately retrieve the remains:
   - Note the location of where remains were found
   - Place the remains in a plastic bag (use gloves if available)
   - Ice or Freeze (if needed)
   - Coordinate with Flight Safety time for pick-up/drop-off

BASH PREVENTION CHECKLIST (4 of 4):

BIRD/WILDLIFE SIGHTING AND DETERRENCE REPORT
MISAWA AIR BASE

Use this form to document bird/wildlife sightings on the airfield. This information is vital to preventing mishaps and damage to aircraft. PILOTS: DO NOT USE THIS FORM FOR ACTUAL BIRD STRIKES. Instead, use AF Form 853 posted in Flying Squadrons and Base Ops.

Promptly report birds or wildlife that are ***an immediate danger to aircraft*** **to** Airfield Management via telephone 226-3110, or via radio.

1. DATE/TIME:_____

2. WEATHER: (CLEAR, FOG, OVERCAST, RAIN, ETC.)
_____

3. TYPE: BIRD OR ANIMAL (CIRCLE ONE)

4. LOCATION ON AIRFIELD: _____

4. SPECIES: (KITE, SPARROW, CROW, FOX, DOG, ETC.)
_____

6. APPROXIMATE NUMBER SIGHTED:
_____

7. BIRD/ANIMAL ACTIVITY: (SOARING, FEEDING, LOAFING, ETC.)
_____

7. (BIRDS) ALTITUDE/HEIGHT: _____

8. POSSIBLE ATTRACTANTS: (RODENTS, BUGS, WATER):
_____

10. DETERRENT ACTION TAKEN/BASH TEAM REPSPONSE:
_____

11. YOUR NAME, OFFICE, DUTY PHONE #:
_____

REMARKS**:** Give as many other details as possible to help define the birds or animals activities. Were they following mowers, crossing the airfield, just flying by, etc?

Attachment 6

REPORTS AND FORMS

A6.1. GENERAL: This ATTACHMENT provides forms required to report bird strikes/sightings per AFI 91-232, AFI 91-234, and 35 FW guidance.

A6.2. Forms included

Title	Description
Bird/Wildlife Sighting and Deterrence Report (attach 1)	Local form used by flight line personnel to report wildlife activity.
AF FORM 853 (attach 2)	Air Force Wildlife Strike Report Form. This report is to be filled out by aircrew members for all actual/suspected bird strikes, and is requested for any near-miss situations, or heavy bird concentrations.

A6.3. Each form contains telephone and FAX information for submitting the completed form to the proper agency.

A6.4. Flight line personnel are responsible to help reduce the hazards posed by birds/wildlife in our local flying area. When completing these forms, fill all blocks to the best of your knowledge; contact 35 FW/SEF with any questions or comments regarding these reports and forms. Give approximations if exact data is unknown and indicate that it is an approximation.

AIR FORCE WILDLIFE STRIKE REPORT

1. UNIT--WING/SQUADRON

2. AIRCRAFT
(alphanumeric designation)

3. TAIL NUMBER/REGISTRATION

4. DATE *(dd mmm yyyy)*

5. TIME *(local)*

6. DAILY PERIOD

- [ ] UNKNOWN
- [ ] DAWN
- [ ] DAY
- [ ] DUSK
- [ ] NIGHT

7a. AIRPORT

NAME

ICAO

HOST ID *(FAA IDENT)*

RUNWAY

OTHER

7b. SPECIAL USE AIRSPACE

- [ ] ALERT
- [ ] DANGER
- [ ] MILITARY OPERATIONS AREA
- [ ] PROHIBITED
- [ ] RESTRICTED
- [ ] TEMPORARY RESERVED AIRSPACE
- [ ] RESTRICTED
- [ ] UNKNOWN

NAME:

7c. LOW-LEVEL ROUTE

- [ ] INSTRUMENT ROUTE IR
- [ ] SLOW ROUTE SR
- [ ] VISUAL ROUTE VR
- [ ] UNKNOWN

OTHER:

8. STRIKE AWARENESS IN FLIGHT

- [ ] YES
- [ ] NO
- [ ] UNKNOWN

9. LATITUDE *(DDMM.M)*

N

S

10. LONGITUDE *(DDMM.M)*

E

W

11. EFFECT ON FLIGHT

- [ ] UNKNOWN
- [ ] ABORTED TAKE-OFF
- [ ] ENGINES SHUTDOWN
- [ ] NONE
- [ ] OTHER
- [ ] PRECAUTIONARY LANDING

12. SPEED ***(KIAS)***

13. ALTITUDE ***(ft AGL)***

14. PHASE OF OPERATION

- [ ] UNKNOWN
- [ ] PARKED
- [ ] TAXIING
- [ ] TAKEOFF ROLL
- [ ] TAKEOFF INITIAL CLIMB
- [ ] CRUISE CLIMB
- [ ] CRUISE
- [ ] CRUISE LOW LEVEL
- [ ] RANGE OPS
- [ ] CRUISE DESCENT
- [ ] HOVER
- [ ] LANDING FINAL APPROACH

14. PHASE OF OPERATION (cont)

- [ ] LANDING TRAFFIC PATTERN
- [ ] LANDING FLARE ROLLOUT
- [ ] MISSED APPROACH/TOUCH & GO
- [ ] OTHER

15. BIRD AVOIDANCE MODEL

- [ ] UNKNOWN
- [ ] NO REPORT
- [ ] LOW
- [ ] MODERATE
- [ ] SEVERE

16. BIRD WATCH CONDITIONS

- [ ] UNKNOWN
- [ ] NO REPORT
- [ ] LOW
- [ ] MODERATE
- [ ] SEVERE

17. WILDLIFE STRUCK

- [ ] UNKNOWN
- [ ] NONE
- [ ] ONE
- [ ] 2-11
- [ ] 11-100
- [ ] MORE THAN 100

18. AVIAN HAZARD ADVISORY SYSTEM

- [ ] UNKNOWN
- [ ] NO REPORT
- [ ] LOW
- [ ] MODERATE
- [ ] SEVERE

19. REMARKS ON LOCATION

AF IMT 853, 20051015, V2

AIR FORCE WILDLIFE STRIKE REPORT

20. COST ESTIMATE

☐ NOT APPLICABLE

☐ ESTIMATED COST *(not yet known)*

☐ ACTUAL COST

$

21. CLASS

☐ CLASS A ☐ CLASS C

☐ CLASS B ☐ CLASS E

22. IMPACT POINTS

(description of impact points and struck or damaged; if list is not representative of the strike, please explain in the remarks section)

	S	D
UNKNOWN	☐	☐
INSIDE ENGINE 1	☐	☐
INSIDE ENGINE 2	☐	☐
INSIDE ENGINE 3	☐	☐
INSIDE ENGINE 4	☐	☐
INSIDE ENGINE 5	☐	☐
INSIDE ENGINE 6	☐	☐
INSIDE ENGINE 7	☐	☐
INSIDE ENGINE 8	☐	☐
OUTSIDE ENGINE 1	☐	☐
OUTSIDE ENGINE 2	☐	☐
OUTSIDE ENGINE 3	☐	☐
OUTSIDE ENGINE 4	☐	☐
OUTSIDE ENGINE 5	☐	☐
OUTSIDE ENGINE 6	☐	☐
OUTSIDE ENGINE 7	☐	☐
OUTSIDE ENGINE 8	☐	☐
FUSELUGE/ANTENNA/SKIN	☐	☐
RADOME/NOSE	☐	☐
WINDSHIELD/CANOPY	☐	☐
WINDSHIELD PENETRATION	☐	☐
TAIL/STABILIZER/RUDDER	☐	☐
WEAPONS/MISSILE POD	☐	☐
LANDING GEAR	☐	☐
LIGHTS	☐	☐
WING/ROTOR	☐	☐
FUEL TANKS	☐	☐
PROPELLER	☐	☐
ECM PODS/PYLONS	☐	☐
OTHER	☐	☐

23. REMAINS FOUND

☐ YES, remains found on aircraft

☐ YES, remains found on runway *(aircraft struck known)*

☐ YES, remains found on runway *(aircraft struck unknown)*

☐ NO

24. DATE REMAINS SENT TO SMITHSONIAN INSTITUTION

(dd mmm yyyy)

25. ADDITIONAL REMARKS

26. SHIPPING WILDLIFE REMAINS

IAW AFMAN 91-223, 5.4.2, feather remains from every bird strike (if available) must be sent to the Smithsonian National Museum of Natural History for identification. Send feathers or feather fragments and a copy of the corresponding AFSAS report to:

Smithsonian Institution
Feather Identification Lab
NHBE 610 MRC 116
PO BOX 37012
Washington, DC 20013-7012

Send as much material as possible to include feet, beak, wing, tail, breast, and back feathers. For wildlife strikes other than birds, send samples of skin, fur, teeth, other non-fleshy remains, or a picture if possible, along with the corresponding AFSAS report to the Smithsonian for identification.

In the event that remains are found on the runway as the result of a suspected strike, they should also be sent to the Smithsonian.

For overnight shipping of a specimen, wrapping the remains in newspaper and freezing it entirely should be adequate. If you collect a whole bird carcass, freeze it per the above instructions and contact the Smithsonian at (202) 633-0801 to see if they could use the specimen in their collection. For overnight shipping send the remains to:

Smithsonian Institution
Feather Identification Lab
ATTN: Dr. Carla Dove
NHBE 610 MRC 116
10th and Constitution Ave NW
Washington DC 20560

AF IMT 853, 20051015, V2 (REVERSE)

BIRD/WILDLIFE SIGHTING AND DETERRENCE REPORT

Use this form to document bird and wildlife sightings and deterrent on the airfield. This information is vital to preventing mishaps and damage to aircraft. PILOTS, DO NOT USE THIS FORM FOR ACTUAL BIRD STRIKES. Instead, use AF Form 853 posted in the Flying Squadrons and Airfield management

Promptly report birds or wildlife that are an ***immediate danger to aircraft*** to Airfield Management via telephone (226-3110) or via radio.

1. DATE/TIME: _____
2. WEATHER: (CLEAR, FOG, OVERCAST, RAIN, ETC.) _____
3. TYPE: BIRD OR ANIMAL (CIRCLE ONE)
4. LOCATION ON AIRFIELD: _____
5. SPECIES: (KITE, SPARROW, CROW, FOX, DOG, ETC.) _____
6. APPROXIMATE NUMBER SIGHTED: # _____
7. BIRD/ANIMAL ACTIVITY: (SOARING, FEEDING, LOAFING, ETC.) _____
8. (BIRDS): ALTITUDE/HEIGHT: _____
9. POSSIBLE ATTRACTANTS: (RODENTS, BUGS, WATER): _____
10. DETERRENT ACTION TAKEN/BASH TEAM RESPONSE: _____
11. YOUR NAME, OFFICE, DUTY PHONE #: _____

REMARKS: Give as many other details as possible to help define the birds or animals activities. Were they following mowers, crossing the airfield, just flying by, etc?

_____

_____

_____

_____

_____

_____

Attachment 7

BASH TEAM CC APPOINTMENT LETTER EXAMPLE

DEPARTMENT OF THE AIR FORCE
35th FIGHTER WING (PACAF)
MISAWA AIR BASE, JAPAN

MEMORANDUM FOR 35 FW/SEF

FROM: 35 OSS/CC

SUBJECT: Appointment of Airfield Operations BASH Abatement Team Qualified Personnel

1. The following members of my organization are appointed as Bird Aircraft Strike Hazard (BASH) Abatement Team Members:

NAME	RANK	OFFICE SYM	PH. NO	DEROS
Moun, Fuhl	Capt	35 OGV	6-5554	25 Aug 08
Eye, Wahl	SSgt	35 OSS/OSAM	6-6969	02 Jan 09

2. All personnel must maintain a flight line driver's license with runway access, complete the explosive handling training provided by weapons safety, maintain M870 (shotgun) qualification and complete the BASH airfield training provided by 35 FW/SEF.

3. This letter supersedes all previous letters. Questions can be directed to Capt John Caveman at 226-4058.

//signed//
JOHN J. COMMANDER, Lt Col, USAF
Commander, 35th Operations Support Squadron

Attachment 8

INDIVIDUAL UNIT SELF INSPECTION CHECKLISTS (1 OF 3):

These checklists are to be distributed by 35 SEF at Bird Hazard Work Group Meetings or semiannually in order to remind all tasked agencies of their responsibilities in the BASH program and to ensure their compliance.

35 FW/SEF BASH PLAN COMPLIANCE CHECKLIST:

- ○ Have you conducted the annual review/update of the 35 FWI 91-203 (BASH Plan)?
- ○ Has all Misawa AB BASH information been collected, compiled and disseminated to the BHWG
- ○ Is the Bird Strike Map updated and distributed to the BHWG and the base flying squadrons?
- ○ Is BASH Abatement Team training current, recall roster updated and disseminated to Airfield Management?
- ○ Are the BASH ammunition and weapons accounts current, and are the weapons properly maintained?
- ○ Is the BASH Prevention Checklist current and distributed to appropriate agencies?
- ○ Are the BASH Individual Unit Self Inspection Checklists current and distributed at the BHWG meetings or semiannually?

35 FW/PA BASH PLAN COMPLIANCE CHECKLIST:

- ○ Are you providing information/programs to inform base personnel and the general public of the measures being taken to control bird/wildlife activity?
- ○ Do you provide photographic services as required to document bird strikes and related activities?
- ○ Do you provide graphic support to 35 FW/SEF and Airfield Management to publicize bird hazards and mitigation actions?

35 OG BASH PLAN COMPLIANCE CHECKLIST:

- ○ Is a Bird Watch Condition (BWC) established at all times?
- ○ Do pilots make timely PIREPS of bird activity?
- ○ Are appropriate procedures published to familiarize pilots with BWC and bird hazard avoidance?
- ○ Do Squadron Flight Safety Officers ensure current bird activity data is available for mission planning and briefings?
- ○ Is the AF form 853, Air Force Wildlife Strike Report readily available in each squadron?

35 OGV BASH PLAN COMPLIANCE CHECKLIST:

- ○ Are SOFs trained in BASH prevention efforts?
- ○ Does the SOF determine the Bird Watch Condition (BWC) during 35 FW flying periods?
- ○ Does the SOF change the BWC as appropriate for known and reported bird activity?
- ○ Does the SOF initiate BASH hazard response when needed through Airfield Management?
- ○ Does the SOF record significant Bird/wildlife activity in the daily SOF report?

INDIVIDUAL UNIT SELF INSPECTION CHECKLISTS (2 of 3):

35 OSS/OSCX (Draughon Range) BASH PLAN COMPLIANCE CHECKLIST:

- ○ Do range controllers declare a Bird Watch Condition (BWC) in accordance with the BASH Prevention Checklist (Attachment E)?
- ○ Do range controllers report BWC changes to Airfield Management and to the SOF?

35 OSS/OSA (Airfield Management) BASH PLAN COMPLIANCE CHECKLIST:

- ○ Do you declare the Bird Watch Condition (BWC) during non 35 FW flying periods?
- ○ Do you act as the 35 FW lead for BASH coordination at the Misawa City Airport?
- ○ Are operational instructions for all approved lethal and non-lethal techniques established?
- ○ Are all weapons and pyrotechnics stored and maintained and accounted for in a proper licensed facility at the Airfield Management building?
- ○ Do you provide initial response to wildlife threats?
- ○ Are the BASH cannons fired throughout the day as needed?
- ○ Is the BWC and wildlife hazards posted for transient aircrews?
- ○ Are timely reports of BASH hazards or strikes reported to the SOF and to 35 FW/SEF?
- ○ Are three BASH inspections of the airfield accomplished daily and logged in the AF IMT 3616 Event Log?
- ○ Are discovered remains collected and give to 35 FW/SEF?
- ○ Do you maintain a 4-whell drive vehicle for BASH Team use and other deterrence operations?

35 OSS/OSAL (ATC Liaison) BASH PLAN COMPLIANCE CHECKLIST:

- ○ Have you coordinated with JASDF ATC controllers to ensure BASH activity found on radar or reported by pilots is reported to Airfield Management and the 35 FW SOF?
- ○ Do ATC controllers issue Bird Watch Conditions (BWC) advisories to pilots?
- ○ If the BWC is Moderate or Severe, does ATC provide the BWC on ATIS?
- ○ Does ground control give priority to the BASH Team when accessing runway and ramp areas?
- ○ Is the MOUI FB5205-92-3005 properly coordinated and updated with the JASDF?

35 MXG (Maintenance Group) BASH PLAN COMPLIANCE CHECKLIST:

- ○ Do personnel report hazardous bird activity to Airfield Management?
- ○ Do personnel immediately report discovered/suspected bird strikes found on aircraft to 35 FW/SEF, 13/14 Ops desks, and QA?
- ○ Do maintenance personnel know the proper actions and notifications to take after a bird/wildlife strike?

INDIVIDUAL UNIT SELF INSPECTION CHECKLISTS (3 of 3)

35 CES (Civil Engineering Squadron) BASH PLAN COMPLIANCE CHECKLIST:

- ○ Do you provide input and advice at the BHWG meetings?
- ○ Is the BASH plan airfield mowing and seeding incorporated into the Integrated Natural Resources Management Plan?
- ○ Are grass height kept between 7-14 inches?
- ○ Are bare areas eliminated through sod or Hydro-seeding?
- ○ Is airfield ponding reduction coordinated through the Host Nation and Parallel Runway Project and QKKA 04-1511 In-House Drainage Project?
- ○ Does the airfield meet edge effect policies?
- ○ Are buildings, hangars, and permanent fixtures bird proofed as needed to the max extent possible?
- ○ Are airfield surveys coordinated through the BHWG for BASH problem areas?
- ○ Is the base mowing map maintained and updated in the MOUI FB5202-92-3005?
- ○ Is a Tree Cutting Plan maintained and coordinated through GOJ?

35 SFS (Security Forces Squadron) BASH PLAN COMPLIANCE CHECKLIST:

- ○ Do you provide M870 shotgun training to BASH team members when coordinated?

NAVAL AIR FACILITY, MISAWA (NAFM) BASH PLAN COMPLIANCE CHECKLIST:

- ○ Do you provide a representative to the BHWG and support the BASH plan?
- ○ Do you provide the 35 SEF (226-2710) with information on bird strikes to Naval Aircraft?

Attachment 9

BASH TEAM LEGAL REVIEW UNDER SOFA:

23 Dec 06

MEMORANDUM FOR 35 FW/JA

FROM: 35 FW/SEF

SUBJECT: Bird Abatement Team Legal Review under SOFA

1. There exists a bird aircraft strike hazard here at Misawa AB. Such strikes can cause lose of USAF funds, assets, and human life. The Bird Abatement Team (BAT) program entails use of non-lethal and lethal methods to minimize bird activity on the airfield while aircraft are present in order to reduce/eliminate this hazard. The BAT will use lethal methods (specifically use of shotguns) to kill one or more birds on the airfield in conjunction with non-lethal methods (such as BASH cannons and pyrotechnic noisemakers) This strategy prevents birds from becoming accustomed to the non-lethal methods, strongly enhances their effectiveness, and thereby significantly reduces the bird strike hazard on the airfield. Over time, this strategy will save lives and millions of dollars in Air Force property.

2. The 35 Fighter Wing Flight Safety Office respectfully requests a review of the BAT strategy under SOFA.

//SIGNED//
TRAVIS V. HIGBEE, Capt, USAF
35 FW Flight Safety

From: Grimmer Jared L Capt 35 FW/JA
Sent: Friday, January 05, 2007 9:56 AM
To: Higbee Travis V Capt 13 FS/DO
Cc: Draper Randon H LtCol 35 FW/JA
Subject: SOFA review of BAT

As for shooting birds, the controlling guidance is the Japanese Environmental Governing Standards (JEGS) chapter on natural resources management. We should have a Integrated Natural Resources Management Plan or INRMP. On a SOFA area or facility (installation) such as Misawa AB, we do not need permission from the Japanese government to act.

Threatened and endangered birds should not be harmed, if possible. The SOFA gives us exemption from these Japanese laws, however, the issue is not squarely addressed in the JEGS; the JEGS merely mentions migratory birds as something for the INRMP. JEGS,

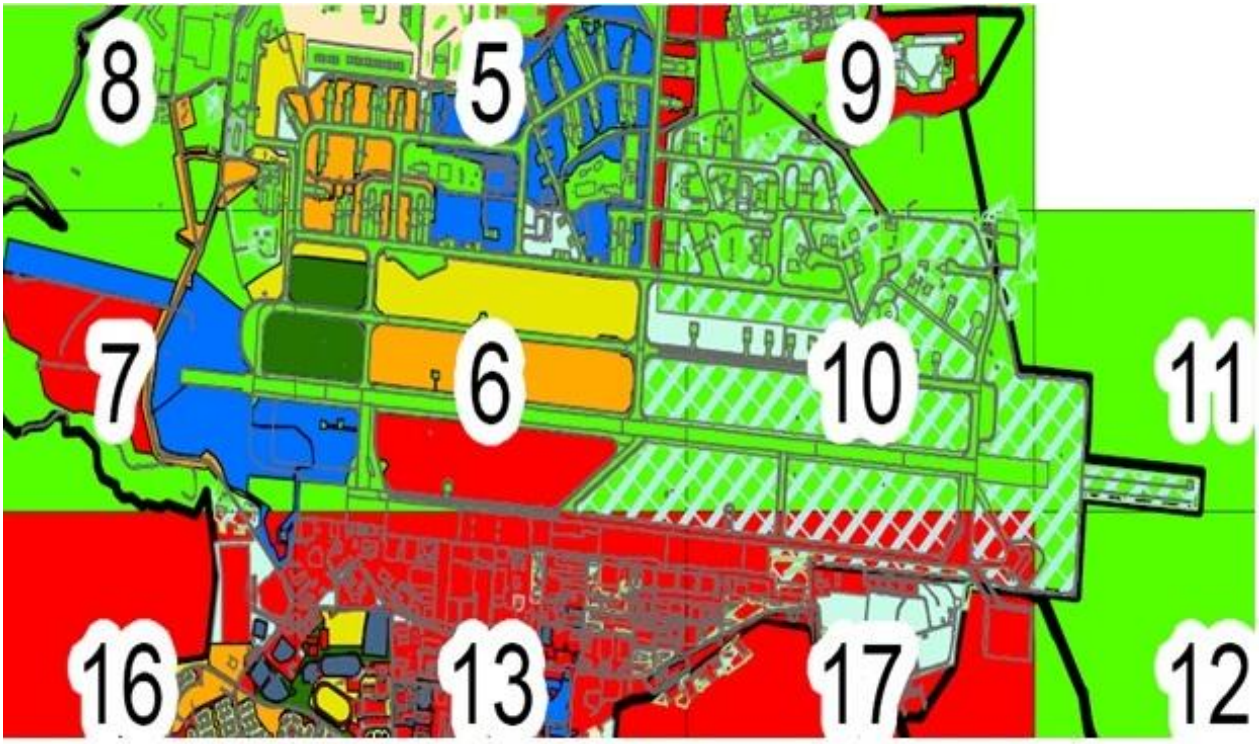
para 13-3.3. The JEGS lists a number of birds as threatened or endangered. JEGS, table 13-3. I have a copy of the table if you don't have access to it and would like a copy.

If you have any additional questions, please let me know.

//Signed//
JARED L. GRIMMER, Capt, USAF
Chief, Civil & International Law
35 FW/JA, Misawa AB, Japan
DSN 315-226-4022

Attachment 10

MOWING MAP



CADASTRE
Installation Boundary

IMPROVEMENTS
Fence
Wall
Athletic Court
Athletic Field
Playground

HYDROGRAPHY
Water Body

TRANSPORTATION
Road Line
Access Ramp
Apron
Helipad
Runway
Shoulder Overrun
Taxiway

BUILDINGS
Permanent

MOWING RESPONSIBILITY
HZ
HZ, Monday
HZ, Tuesday
HZ, Wednesday
HZ, Thursday
HZ, Friday
HZ, Once Every 2 Weeks
HZ, Monthly
Home Owner
Housing Contract
Housing Service
JASDF
Navy PWC
Service Contract
Services

Maintain Grass Height 7”- 14”